

**Immune globulin, intravenous
IVIG**

Asceniv™, Bivigam®, Cytogam®,
Flebogamma DIF®, Gammagard® liquid,
Gammagard S/D®, Gamunex-C®,
Gammaked®, Gammaplex®,
Octagam®, Panzyga®, Privigen®

Place of Service

Office Administration

Home Infusion Administration

Hospital Administration

Infusion Center Administration

Outpatient Facility Administration*

[*Prior authorization required – see section (1)]

HCPCS

Cytogam®: **J0850** per 50 ml vial (2500 mg)

Cytogam®: **90291** per dose

Privigen®: **J1459** per 500 mg

Asceniv™: **J1554** per 500 mg

Bivigam®: **J1556** per 500 mg

Gammaplex®: **J1557** per 500 mg

Gamunex-C®: **J1561** per 500 mg

Gammaked®: **J1561** per 500 mg

Gammagard® S/D: **J1566** per 500 mg

Immune globulin, IV, lyophilized (e.g., powder),

NOS: **J1566** per 500 mg

Octagam®: **J1568** per 500 mg

Gammagard® liquid: **J1569** per 500 mg

Flebogamma DIF®: **J1572** per 500 mg

Panzyga®: **J1576** per 500 mg

Immune globulin, IV, non-lyophilized, NOS:

J1599 per 500 mg

Conditions listed in policy (see criteria for details)

- [Autoimmune mucocutaneous blistering diseases \(AMBDs\)](#)
- [CAR-T induced hypogammaglobulinemia](#)
- [Chronic lymphocytic leukemia or small lymphocytic lymphoma](#)
- [Chronic inflammatory demyelinating polyneuropathy \(CIDP\) and variants](#)
- [Guillain-Barre syndrome](#)
- [Hematopoietic stem cell transplant \(includes bone marrow transplantation\)](#)
- [Hemolytic anemia – autoimmune](#)
- [HIV – pediatric](#)
- [Hypogammaglobulinemia associated with anti-CD20 monoclonal antibodies](#)
- [Immunotherapy-related toxicities secondary to immune-checkpoint inhibitor therapy](#)
- [Kawasaki disease](#)
- [Multifocal motor neuropathy](#)
- [Multiple myeloma](#)
- [Myasthenia gravis](#)
- [Polymyositis and dermatomyositis](#)
- [Primary immunodeficiency disorders](#)
- [Primary immune thrombocytopenia \(ITP\)](#)
- [Solid organ transplants](#)

AHFS therapeutic class: Serums

Mechanism of action: Immune globulin is a sterile, nonpyrogenic solution of globulins containing many antibodies normally present in adult human blood.

(1) Special Instructions and Pertinent Information

Covered under the medical benefit, please submit clinical information for prior authorization review via fax.

****CRITERIA FOR HOSPITAL OUTPATIENT FACILITY ADMINISTRATION ****

AAAAI Guidelines 2011, MCG™ Care Guidelines, 19th edition, 2015

Members with the following plans: **PPO, Direct Contract HMO, and when applicable, ASO, Shared Advantage, HMO (non-direct contract)** may be required to have their medication administered at a preferred site of service, including the home, a physician's office, or an independent infusion center not associated with a hospital.

For members that cannot receive infusions in the preferred home or ambulatory setting AND meet one of the following criteria points, drug administration may be performed at a hospital outpatient facility infusion center.

ADMINISTRATION OF IVIG IN THE HOSPITAL OUTPATIENT FACILITY SITE OF CARE REQUIRES ONE OF THE FOLLOWING: *(Supporting Documentation must be submitted)*

1. **Patient is initiating on IVIG or is being re-initiated on IVIG after at least 6 months off therapy.** *Subsequent doses after the first month will require medical necessity for continued use in the hospital outpatient facility site of care.*
2. **Patient is changing IVIG products.** *Subsequent doses will require medical necessity for continued use in the hospital outpatient facility site of care.*

OR

Additional clinical monitoring is required during administration as evidenced by one of the following:

3. **Patient has experienced a previous severe adverse event to IVIG based on documentation submitted.**
4. **Patient continues to experience moderate to severe adverse events to IVIG based on documentation submitted, despite receiving premedication such as acetaminophen, steroids, diphenhydramine, fluids, etc.**
5. **Patient is clinically unstable based on documentation submitted.**
6. **Patient is physically or cognitively unstable based on documentation submitted.**

(2) Prior Authorization/Medical Review is required for the following condition(s)

All requests for IVIG must be sent for clinical review and receive authorization prior to drug administration or claim payment.

Autoimmune mucocutaneous blistering diseases (AMBDs)

1. Diagnosis of one of the following:
 - a. pemphigus foliaceus
 - b. pemphigus vulgaris
 - c. bullous pemphigoid
 - d. cicatricial pemphigoid
 - e. epidermolysis bullosa acquisita

AND

2. Diagnosis is confirmed by lesional tissue biopsy or serology, **AND**
3. Inadequate response to an immunosuppressant and a systemic corticosteroid, or contraindication or intolerance to immunosuppressants and systemic corticosteroids, **AND**
4. Not used in combination with another immunomodulator

Covered Doses

Up to 2 g/kg given intravenously over 3-5 days once monthly

Coverage Period

Initial:

Up to 6 months

First Reauthorization:

Cover for another 12 months if patient has had clinical response (i.e., a reduction in lesions and/or ability to reduce concomitant steroids or immunosuppressants.)

Subsequent authorizations:

Cover yearly based on continued response

ICD-10:

L10.0, L10.2, L12.0, L12.1, L13.8

Chimeric antigen receptor T-cell (CAR-T) therapy induced hypogammaglobulinemia

1. Diagnosis of CAR-T induced hypogammaglobulinemia, **AND**
2. Prescribed by an oncologist or immunologist

Covered Doses

Given intravenously. Dose is highly variable

Coverage Period

Yearly based upon continued response to treatment

ICD-10:

D80.1, D80.0-D83.9

Chronic lymphocytic leukemia or small lymphocytic lymphoma

1. History of hypogammaglobulinemia or recurrent bacterial infections

Covered Doses

Up to 400 mg/kg given intravenously as often as every 3 weeks, or up to 500 g/kg given intravenously every 4 weeks

Coverage Period

Indefinite

ICD-10:

C91.10, C91.12

Chronic inflammatory demyelinating polyneuropathy (CIDP) and variants

1. Diagnosis of one of the following:
 - a. Typical chronic inflammatory demyelinating polyneuropathy (CIDP)
 - b. Multifocal acquired demyelinating polyneuropathy
 - c. Pure sensory chronic inflammatory demyelinating polyneuropathy
 - d. Distal chronic inflammatory demyelinating polyneuropathy
 - e. Focal chronic inflammatory demyelinating polyneuropathy
 - f. Motor chronic inflammatory demyelinating polyneuropathy
- AND**
2. Diagnosis by a neurologist, **AND**
 3. Electrodiagnostic testing (nerve conduction studies) shows definite CIDP OR nerve conduction studies show possible CIDP AND 2 of the following to confirm the diagnosis: CSF examination, nerve biopsy, MRI, ultrasound, **AND**
 4. Motor or sensory dysfunction of more than 1 limb developing over at least 2 months, **AND**
 5. Absent or reduced tendon reflexes in affected limbs or gait ataxia

Covered Doses

Initial:

Commercial

Immune Globulin Intravenous, IVIG

Up to 2 g/kg given intravenously by IV over up to a 5-day period

Maintenance:

Up to 2 g/kg given intravenously as often as every 2 weeks. For requests more frequent than every 2 weeks, total dose given over a two week period should not exceed 2 g/kg.

Coverage Period

Initial:

Up to 5 days depending on dose (See initial dosing)

Reauthorization:

As needed if patient continues to meet preservice criteria

Maintenance:

Cover yearly as long as patient continues to respond to treatment e.g. control of symptoms (e.g., weakness, sensory loss, imbalance, pain), and/or improvement or maintenance of functional ability.

ICD-10:

G61.81

Guillain-Barre syndrome

1. Diagnosis of Guillain-Barre, **AND**
2. Treatment with IVIG will begin within 4 weeks of onset of neuropathic symptoms

Covered Doses

Up to 400 mg/kg given intravenously daily for 5 days

Coverage Period

Initial: 5 days

Reauthorization: Retreatment with IVIG has not been studied for Guillain-Barre syndrome

ICD-10:

G61.0

Hematopoietic stem cell transplant (includes bone marrow transplantation)

1. Being used for prevention of bacterial infections among allogeneic hematopoietic stem cell transplant (HSCT) recipients, **AND**
2. One of the following:
 - a. Patient is within 100 days post-allogeneic hematopoietic cell transplantation or planned allogeneic hematopoietic cell transplantation within 7 days of the first dose, OR
 - b. Patient has severe hypogammaglobulinemia (serum immunoglobulin G level less than 400 mg/dl), OR
 - c. Patient has chronic GVHD on steroids or has chronic GVHD with pulmonary infection AND IgG level is below normal as defined by the testing laboratory, OR
 - d. Patient has positive CMV serology

Covered Doses

Up to 500 mg/kg/week given intravenously. Increased doses or frequency are covered, as needed to maintain serum IgG levels > 400 mg/dL.

Coverage Period

- For patients within 100 days of HSCT, cover up to 100 days post HSCT
- For hypogammaglobulinemia, chronic GVHD, or positive CMV serology and meeting preservice criteria above, cover for 1 year or up to 24 months post-transplant (whichever is less).
- Reauthorization for patients who are less than 24 months post-transplant requires patient is responding to therapy.
- Reauthorization on a yearly basis for patients who are more than 24 months post-transplant requires documented current IgG level <400mg/dl OR patient has chronic GVHD with IgG level that is less than normal as defined by the testing laboratory.

CPT:

38240

ICD-10:

30233Y1

Hemolytic anemia - autoimmune

1. Diagnosis of warm-type autoimmune hemolytic anemia, **AND**
2. Patient has experienced an inadequate response to high dose steroids

Covered Doses

Up to 1 g/kg given intravenously per day for up to 7 days

Coverage PeriodInitial: Up to 7 daysReauthorization: The efficacy and safety of retreatment with IVIG has not been established.**ICD-10:**

D59.1

HIV - pediatric

1. Age less than 13 years, **AND**
2. Symptomatic HIV or history of recurrent infections, **AND**
3. CD4+ count > 200/mm³

Covered Doses

Up to 400 mg/kg given intravenously as often as every 4 weeks

Coverage Period

Indefinite

ICD-10:

B20

Hypogammaglobulinemia associated with anti-CD20 monoclonal antibodies

1. History of hypogammaglobulinemia or recurrent bacterial infections, **AND**
2. Patient has received treatment with an anti-CD20 monoclonal antibody (e.g., rituximab, Arzerra, Gazyva)

Covered Doses

Up to 400 mg/kg given intravenously as often as every 3 weeks, or up to 500 g/kg given intravenously every 4 weeks

Coverage Period

1 year

ICD-10:

D80.1

Immunotherapy-related toxicities secondary to immune-checkpoint inhibitor therapy

1. Being treated with an immune-checkpoint inhibitor, **AND**
2. Treatment of the following immunotherapy-related toxicities secondary to immune-checkpoint inhibitor therapy:
 - a. Severe pneumonitis refractory to methylprednisolone
 - b. Severe myasthenia gravis
 - c. Moderate or severe Guillain-Barré Syndrome or severe peripheral neuropathy in combination with pulse-dose methylprednisolone
 - d. Encephalitis in combination with pulse-dose methylprednisolone
 - e. Transverse myelitis
 - f. Severe inflammatory arthritis refractory to high-dose corticosteroids
 - g. Severe bullous dermatitis
 - h. Stevens-Johnson syndrome or toxic epidermal necrolysis
 - i. Severe myocarditis, pericarditis, arrhythmias, impaired ventricular function, or conduction abnormalities refractory to pulse-dose methylprednisolone
 - j. Moderate or severe myalgias or myositis refractory to corticosteroids

Covered Doses

Up to 2 gm/kg total dose

Coverage Period:

Once per treatment course

ICD-10:

J70.2, J70.4, G70.00, G70.01, G61.0, G61.1, G61.81, G61.82, G61.89, G61.9, G03.8, G03.9, G04.81, G04.89, G04.90-G04.91, G56.80-G56.83, G56.90-G56.93, G57.80-G57.83, G57.90-G57.93, G90.09, I44.0, I44.1-I44.3, I44.30, I44.39, I47.0, I45.0, I45.10, I45.19, I45.2-I45.6, I45.81, I45.89, I45.9, I49.9, L13.8, L13.9, L51.1, L51.2, M06.4, M60.80, M60.811, M60.812, M60.819, M60.821, M60.822, M60.829, M60.831, M60.832, M60.839, M60.841, M60.842, M60.849, M60.851, M60.852, M60.859, M60.861, M60.862, M60.869, M60.871, M60.872, M60.879, M60.88, M60.89, M60.9, M79.1

Commercial

Immune Globulin Intravenous, IVIG

Kawasaki disease

1. Patient is now on or will be on combination treatment with high dose aspirin (80-100 mg/kg day)

Covered Doses

Up to 2 g/kg given intravenously as a single dose

OR

Up to 400 mg/kg given intravenously once daily for 4 consecutive days

Coverage Period

Initial:

- If giving as a single dose, authorize for 2 doses (one initial and one for possible retreatment)
- If giving as a multiple dose regimen, authorize for 8 doses (4 initial and 4 for possible retreatment). Check dose to make sure only authorizing for 400 mg/kg once daily.

Reauthorization beyond the first retreatment: Subsequent retreatments after the first retreatment have not been evaluated for efficacy or safety.

ICD-10:

M30.3

Multifocal motor neuropathy

1. Diagnosis by a neurologist, confirmed by electrodiagnostic testing (nerve conduction studies), **AND**
2. Asymmetric weakness and/or atrophy without sensory dysfunction for at least one month

Covered Doses

Up to 2.4 gm/kg/month

Coverage Period

Yearly, based on continued response

ICD-10:

G61.82

Multiple myeloma

1. Greater than or equal to 2 significant infections within the last year or a single life-threatening infection

Covered Doses

Up to 500 mg/kg given intravenously every month

Coverage Period

Yearly

ICD-10:

C90.00-C90.02

Myasthenia gravis

1. Diagnosis of myasthenia gravis, **AND**
2. Prescribed by a neurologist, **AND**
3. Patient has experienced an inadequate response or has an intolerance or contraindication to at least one of the following: a corticosteroid, mycophenolate, azathioprine, cyclosporine, or cyclophosphamide

Covered Doses

Up to 2 g/kg given intravenously per month

Coverage Period

Initial: 3 months

Reauthorization: Yearly based upon continued response to treatment

ICD-10:

G70.00, G70.01

Polymyositis and dermatomyositis

1. Inadequate response to treatment with high dose corticosteroids (equivalent to prednisone 40-60 mg/d or highest tolerated dose), **AND**
2. Inadequate response, intolerable side effect, or contraindication to an immunosuppressant (i.e., azathioprine, methotrexate, tacrolimus, cyclosporin A, mycophenolate, cyclophosphamide)

Covered Doses

Up to 2 gm/kg total given intravenously each month

Coverage Period

Yearly based upon continued response to treatment

ICD-10:

M33.00- M33.02, M33.09-M33.12, M33.19, M33.90-M33.92, M33.99, M36.0
M33.20-M33.22, M33.29

Primary immunodeficiency disorders

1. Diagnosis of ONE of the following primary immunodeficiency disorders
 - a. Common variable hypogammaglobulinemia
 - b. Congenital agammaglobulinemia (e.g., X-linked agammaglobulinemia, BTK deficiency)
 - c. Ectodermodyplasia with immunodeficiency (IKBKG: Inhibitor of κ B kinase g chain, NEMO (nuclear factor κ B essential modulator) deficiency, IKBA/IKBKB GOF mutation)
 - d. Variable immunodeficiency with hyper-IgM (e.g., AID deficiency, UNG deficiency, INO90 deficiency, MSH6 deficiency)
 - e. WHIM: Warts, hypogammaglobulinemia, immunodeficiency, myelokathexis
 - f. Severe combined immunodeficiency (SCID)
 - g. Wiskott-Aldrich Syndrome
 - h. Combined immunodeficiency (CID) [e.g., IL21 deficiency, Wiskott-Aldrich Syndrome, WIP deficiency, Arp2/3-mediated filament branching defect, RIDDLE (Radiosensitivity, Immune Deficiency, Dysmorphic features, Learning difficulties) syndrome, ICF (immunodeficiency with centromeric instability and facial anomalies), FILS syndrome, Ligase I deficiency, MYSM1 deficiency, Roifman syndrome, Tricho-Hepato-Enteric Syndrome (THES), Wiedemann-Steiner syndrome]
 - i. Di George's syndrome
 - j. Hyper IgE syndrome (e.g., IL6 receptor deficiency)
 - k. AIPS-Caspase 8
 - l. CD70 deficiency, CD20 deficiency, SAP deficiency (XLPI), X-linked magnesium EBV and neoplasia (XMEN)
 - m. PI4/LAMTOR2 deficiency
 - n. PLAID (PLC γ 2 associated antibody deficiency and immune dysregulation)
 - o. GOOD syndrome

AND

2. One of the following:
 - a. IgG <200 mg/dL, OR
 - b. All or the following:
 - i. Member has a history of recurrent bacterial infections, AND
 - ii. Inability to respond to IgG antibody production after antigenic challenge against diphtheria and tetanus toxoids or pneumococcal polysaccharide vaccine, AND
 - iii. Decreased IgG concentrations (<500mg/dL or below normal as defined by testing laboratory) documented on two or more occasions OR diagnosed by an allergist or immunologist if IgG concentrations are not decreased (>500mg/d or normal as defined by the testing laboratory)

Covered Doses

200-800 mg/kg given intravenously no more often than every 3-4 weeks, and not to exceed 2 doses per month

Coverage Period

Yearly based upon continued response to treatment

ICD-10:

D80.0, D80.1, D80.3, D80.5, D80.6, D80.7, D81.0-D81.2, D81.6, D81.7, D81.89, D81.9, D82.0, D82.1, D82.3, D82.4, D83.0, D83.1, D83.2, D83.8, D83.9

Primary immune thrombocytopenia (ITP)

1. One of the following:

- a. Acute primary ITP and a rapid increase in platelets is required for surgery, invasive procedure, or acute bleeding episode, OR
- b. Chronic primary ITP and platelet count is less than $30 \times 10^9/L$ ($<30,000/mm^3$)

Covered Doses and Coverage Period:

Acute ITP: Up to 2 g/kg given intravenously over 2-5 days for 5 doses total

Chronic ITP: Up to 2 g/kg IV dose per month for up to 12 doses over up to 12 months

Subsequent reauthorization for acute or chronic ITP requires the following:

- Patient had a prior response to IVIG, defined as platelet count $>30 \times 10^9/L$, AND
- Either of the following: Patient has continued thrombocytopenia (defined as platelet count $<30 \times 10^9/L$) or patient is scheduled for surgery or invasive procedure

ICD-10:

D69.3

Solid organ transplant

1. Documented solid organ transplant, including pre/perioperative prevention or for treatment of antibody mediated rejection of allograft

Covered Doses

Given intravenously. Dose is highly variable

Coverage Period

Initial: 16 weeks per treatment course

ICD-10:

Z94.0, Z94.1, Z94.4

(3) The following condition(s) DO NOT require Prior Authorization/Preservice

All requests for IVIG (intravenous immune globulin) must be sent for clinical review and receive authorization prior to drug administration or claim payment.

(4) This Medication is NOT medically necessary for the following condition(s):

Blue Shield's research indicates there is inadequate clinical evidence to support off-label use of this drug for the following conditions (Health and Safety Code 1367.21):

- Alopecia universalis
- Aplasia – Pure red blood cell
- Asthma
- Atopic dermatitis
- Autoinflammatory syndrome
- Burn patients
- Chronic fatigue syndrome
- Chronic granulomatous disease (CGD)

- Clostridium difficile colitis in adults
- Complement deficiency
- Crohn's disease
- Cystic fibrosis
- Epidermodysplasia verruciformis (EV)
- Epstein-barr induced cerebellar ataxia
- Familial hemophagocytic lymphohistiocytosis (FHL)
- Gastroenteritis
- Hemolytic uremic syndrome
- Hemophagocytic syndrome
- Hemophilia
- Herpes simplex encephalitis (HSE)5
- HIV in Adults
- Hopkin's Syndrome
- Immunodeficiency, polyendocrinopathy, X-linked (IPEX)
- In vitro –fertilization (Adjunct)
- Isaac's syndrome
- Isolated IgG4 deficiency
- Juvenile rheumatoid arthritis
- Leukocyte adhesion deficiency (LAD)
- Lymphoproliferative disorder-post transplant
- Lysinuric protein intolerance
- Malaria
- Mendelian susceptibility to mycobacterial disease (MSMD)
- Multiple sclerosis
- Myocarditis
- Neonatal infection
- Nephropathy
- Ocular cicatricial pemphigoid
- Otitis media
- Paraneoplastic neurological syndrome
- Paraproteinaemic demyelinating neuropathy
- Recurrent spontaneous pregnancy loss
- Rheumatic fever-acute
- Rheumatoid arthritis
- RH immunizations
- Rotavirus infection
- Selective IgA deficiency
- Sepsis
- Stevens Johnson's syndrome
- Stiff man/person syndrome
- Still's Disease
- Systemic lupus erythematosus
- Systemic vasculitis
- Toxic epidermal necrolysis
- Thrombocytopenia – antenatal/neonatal
- Streptococcal toxic shock syndrome
- Urticaria delayed pressure

- Varicella Zoster exposure
- Vasculitis leukocytoclastic
- Wegener's Granulomatosis

Coverage for a Non-FDA approved indication, requires that criteria outlined in Health and Safety Code § 1367.21, including objective evidence of efficacy and safety are met for the proposed indication.

Please refer to the Provider Manual and User Guide for more information.

(5) Additional Information

How supplied:

IVIg usual concentration: 5% = 5 gm/100ml, 10% = 10 gm/100ml, 20%, 20 gm/100ml

Asceniv™ (10%): 5 gm (single-use vial)

Bivigam® (10%): 5, 10 gm (single-use vial)

Cytogam®: 2500 mg/50 mL vials (single-use vial)

Flebogamma DIF® (5%): 0.5, 2.5, 5, 10, 20 gm (single-use vial)

Flebogamma DIF® (10%): 5, 10, 20 gm (single-use vial)

Gammagard® liquid (10%): 1, 2.5, 5, 10, 20, 30 gm (single-use bottle)

Gammagard S/D® (5%): 5, 10 gm (single-use bottle)

Gamunex-C® (10%): 1, 2.5, 5, 10, 20, 40 gm (single-use bottle)

Gammaked® (10%): 1, 2.5, 5, 10, 20 gm (single-use bottle)

Gammaplex® (10%): 5, 10, 20 gm (single-use bottle)

Gammaplex® (5%): 5, 10, 20 gm (single-use bottle)

Octagam® (5%): 1, 2.5, 5, 10, 25 gm (single-use bottle)

Octagam® (10%): 2, 5, 10, 20 gm

Panzyga® (10%): 1, 2.5, 5, 10, 20, 30 gm (single-use bottle)

Privigen® (10%): 5, 10, 20, 40 gm (single-use vial)

(6) References

- Achiron A, Gabbay U, Gilad R, et al. Intravenous immunoglobulin treatment in multiple sclerosis. Effect on relapses. *Neurology* 1998; 50:398-402.
- Achiron A, Kishner I, Sarova-Pinhas I, et al. Intravenous immunoglobulin treatment following the first demyelinating event suggestive of multiple sclerosis: a randomized, double-blind, placebo-controlled trial. *Arch Neurol* 2004;61:1515-20.
- AHFS®. Available by subscription at <http://www.lexi.com>
- Ahmed AR. Consensus Statement on the Use of intravenous immunoglobulin Therapy in Autoimmune Blistering Diseases. *Arch Dermatol* 2003 Aug;139(8): 1051-9.
- Amagai M, Igeda S, Shimizu H, et al. A randomized double-blind trial of intravenous immunoglobulin for pemphigus. *J Am Acad Dermatol* 2009;60(4):595.
- American College of Obstetricians and Gynecologists. ACOG practice bulletin. Management of recurrent pregnancy loss. Number 24, February 2001. American College of Obstetricians and Gynecologists. *International Journal of Gynecology & Obstetrics* 2002; 78(2):179-90.
- American Academy of Allergy Asthma and Immunology. Guidelines for the Site of Care for Administration of IGIV Therapy. December 2011.
- Asceniv (immune globulin, human - slra) [Prescribing Information]. Boca Raton, FL: ADMA Biologics, 4/2019.
- Bivigam (immune globulin, human) [Prescribing information]. Boca Raton, FL: ADMA Biologics, Inc.; 12/2022.

- Bonilla FA, Khan DA, Ballas ZK et al. Practice parameter for the diagnosis and management of primary immunodeficiency. *Allergy Clin Immunol* 2015; 136(5): 1186-1205;1205 e1-e78.
- Centers for Disease Control and Prevention. Guidelines for preventing opportunistic infections among hematopoietic stem cell transplant recipients: recommendations of CDC, the Infectious Diseases Society of America, and the American Society of Blood and Marrow Transplantation. *MMWR Morb Mortal Wkly Rep.* 2000; 49(No. RR-10):1-125. (PubMed 10993565).
- Conley ME, Notarangelo LD, etzioni A, et al. *[Representing PAGID (Pan-American Group for Immunodeficiency) and ESID (European Society for Immunodeficiencies)]*. Diagnostic criteria for primary immunodeficiencies. *Clin Immun.* Dec 1999;93(3):190-97.
- Cytogam (cytomegalovirus immune globulin, human) [Prescribing Information]. Roswell, GA: Saol Therapeutics Research Limited; 8/2020.
- DrugDex®. Available by subscription at <http://www.micromedexsolutions.com/home/dispatch>
- Dyck PJ, Litchy WJ, Kratz KM, et al. A plasma exchange versus immune globulin infusion trial in chronic inflammatory demyelinating polyradiculoneuropathy. *Ann. Neurol.* 1994;36:838–845.
- Fazekas F, Deisenhammer F, Strasser-Fuchs S, Nahler G, Mamoli B. Randomised placebo-controlled trial of monthly intravenous immunoglobulin therapy in relapsing-remitting multiple sclerosis. Austrian Immunoglobulin in Multiple Sclerosis Study Group [abstract]. *Lancet* 1997; 349:589-93.
- Flebogamma (immune globulin, human) [Prescribing Information]. Barcelona, Spain: Grifols USA, LLC; 9/2019.
- Gammagard liquid (Immune globulin, human) [Prescribing information]. Lexington, MA: Baxalta US Inc.; 3/2021.
- Gammagard S/D (Immune globulin, human) [Prescribing information]. Lexington, MA: Baxalta US Inc.; 1/2014.
- Gammaked (Immune globulin, human) [Prescribing information]. Research Triangle Park: Grifols Therapeutics LLC; 1/2020.
- Gammaplex (Immune globulin, human) [Prescribing information]. Durham, NC: BPL USA, Inc.; 3/2020.
- Gamunex-C (Immune globulin, human) [Prescribing information]. Research Triangle Park: Grifols Therapeutics LLC; 1/2020.
- Gurcan H, Jeph S, Ahmed A. Intravenous immunoglobulin therapy in autoimmune mucocutaneous blistering diseases: a review of the evidence for its efficacy and safety. *Am J Clin Dermatol* 2010; 11(5):315-26.
- Harman KE & Black MM: High-dose intravenous immune globulin for the treatment of autoimmune blistering diseases: an evaluation of its use in 14 cases. *Br J Dermatol* 1999; 140(5):865-874.
- Hughes RA, Wijdicks EF, Barohn R, et al. Practice Parameter: Immunotherapy for Guillain-Barre Syndrome: report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology* 2003;61(6):736.
- Joint Task Force of the EFNS and the PNS. European Federation of Neurological Societies/Peripheral Nerve Society guideline on management of multifocal motor neuropathy. Report of a joint task force of the European Federation of Neurological Societies and the Peripheral Nerve Society--first revision. *J Peripher Nerv Syst* 2010;15(4):295-301.
- MCG™ Care Guidelines, 19th edition, 2015, Home Infusion Therapy, CMT: CMT-0009(SR)
- National Comprehensive Cancer Network. Chronic Lymphocytic Leukemia/ Small Lymphocytic Leukemia (Version 2.2023). Available at <http://www.nccn.org>.
- National comprehensive cancer network. Management of Immunotherapy-Related Toxicities (Version 1.2023). Available at <http://www.nccn.org>.
- National Comprehensive Cancer Network. Prevention and Treatment of Cancer-Related Infections (Version 3.2022). Available at <http://www.nccn.org>
- Neunert C, Lim W, Crowther M. The American Society of Hematology 2011 evidence-based practice guideline for immune thrombocytopenia. *Blood* 2011;117(16): 4190-4207.

- Octagam (Immune globulin, human) [Prescribing information]. Paramus, NJ: Octapharma USA Inc.; 6/20021.
- Panzyga (Immune globulin, human) [Prescribing information]. New York, NY: Octapharma USA; 1/2021.
- Patwa HS, Chaudhry V, Katzberg H, Rae-Grant AD, So YT. Evidence based guideline intravenous immunoglobulin in the treatment of neuromuscular disorders; report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. *Neurology*. 2012, 78(13):1009.
- Perez EE, Orange JS, Bonilla F et al. Work Group Report of the American Academy of Allergy, Asthma & Immunology: Update on the use of immunoglobulin in human disease: A review of evidence. *J Allergy Clin Immunol* 2017;139: S1-46.
- Practice Committee of the American Society for Reproductive Medicine. Intravenous immunoglobulin (IVIg) and recurrent spontaneous pregnancy loss. *Fertil Steril*. 2004;82 Suppl 1: S199-S200.
- Privigen (Immune globulin, human) [Prescribing information]. Kankakee, IL: CSL Behring LLC; 3/2022.
- Raanani P, Gafter-Gvili A, Paul M, Ben-Bassat I, Leibovici L, Shpilberg O. Immunoglobulin prophylaxis in hematological malignancies and hematopoietic stem cell transplantation. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD006501.
- Rodeghiero F, Stasi R, Gernsheimer T, et al. Standardization of terminology, definitions and outcome criteria in immune thrombocytopenic purpura of adults and children: report from an international working group. *Blood* 2009; 113:2386.
- Ropper, AH. Current treatments for CIDP. *Neurology* 2003;60:S16-S22
- Sanders DB, Wolfe GI, Benatar M et al. International consensus guidance for management of myasthenia gravis: Executive summary. *Neurology* 2016;87(4):419-25.
- Sorensen et al. Intravenous immunoglobulin G reduces MRI activity in relapsing multiple sclerosis. *Neurology* 1998;50:1273-81.
- Strasser-Fuchs S, Fazekas F, Deisenhammer F, Nahler G, Mamoli B. The Austrian Immunoglobulin in MS (AIMS) study: Final analysis. *Mult Scler* 2000;6:S9-13.
- Tangye SG, et al. Human Inborn Errors of Immunity: 2019 Update on the Classification from the International Union of Immunological Societies Expert Committee. *J Clin Immunol*. 2020 Jan;40(1):24-64.
- US Public Health Service (USPHS) and Infectious Diseases Society of America (IDSA) Prevention of Opportunistic Infections Working Group. 2001 USPHS/IDSA guidelines for the prevention of opportunistic infections in persons infected with human immunodeficiency virus.
- Van Doorn PA, Ruts L. Treatment of chronic inflammatory demyelinating polyneuropathy. *Curr Opin Neurol* 2004;17(5):607-13.
- Van Schaik IN, van den Berg LH, de Haan R, Vermeulen M. Intravenous immunoglobulin for multifocal motor neuropathy. *Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD004429.
- Van den Bergh PYK, et al. European Academy of Neurology/Peripheral Nerve Society guideline on diagnosis and treatment of chronic inflammatory demyelinating polyradiculoneuropathy: Report of a joint Task Force-Second revision. *J Peripher Nerv Syst*. 2021 Sep;26(3):242-268.

(7) Policy Update

Date of last revision: 2Q2024

Date of next review: 4Q2024

Changes from previous policy version:

- No clinical change to policy following revision.

