



## IVIG Immune Globulins (immunoglobulin) (Intravenous)

Effective Date: January 1, 2022

Number: MG.MM.PH.86

### Medical Guideline Disclaimer

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### LENGTH OF AUTHORIZATION

- Initial and renewal authorization periods vary by specific covered indication.
- The initial authorization will be provided up to 6 months unless otherwise specified and may be renewed.

### DOSING LIMITS

#### A. Max Units (per dose and over time) [Medical Benefit]:

Indication	Billable Units	Max Units Per # days (unless otherwise specified)
PID	184	21
CIDP	Load: 460	4
	Maintenance: 230	21
Immune thrombocytopenia/ITP	460	28
FAIT	200	7

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<b>Kawasaki's Disease (<i>Pediatric Patients only</i>)</b>	232	1 dose only
<b>Multifocal Motor Neuropathy</b>	460	28
<b>CLL/MM</b>	92	21
<b>ALL</b>	92	21
<b>HIV (<i>Pediatric Patients only</i>)</b>	47	28
<b>Guillain-Barre</b>	460	5 ( <i>for one cycle only</i> )
<b>Myasthenia Gravis</b>	460	28
<b>Auto-immune blistering diseases</b>	460	28
<b>Bone Marrow or Stem Cell Transplant</b>	115	7
<b>Dermatomyositis/Polymyositis</b>	460	28
<b>Complications of transplanted solid organ (<i>kidney, liver, lung, heart and pancreas transplants</i>)</b>	460	28
<b>Stiff Person</b>	460	28
<b>Toxic shock syndrome</b>	460	5 ( <i>for one cycle only</i> )
<b>NAIT</b>	16	2 doses only
<b>Management of Immune Checkpoint Inhibitor Related Toxicity</b>	460	5 ( <i>for one cycle only</i> )

**Guideline**

**Site of Care Criteria**

Home (Place of Service 12), an ambulatory infusion suite (AIS, place of Service 12), or a prescriber's office (in a non-hospital setting, Place of Service 11) are the preferred sites of care for Intravenous Immune Globulins.

- The first dose may be given at the facility of choice by the physician; all subsequent doses will be given by home infusion, an Ambulatory Infusion Suite(AIS), or a prescriber's office (in a non-hospital setting) coordinated by EmblemHealth's preferred vendors.
- Reinitiating drug after at least a six-month gap in therapy, the first dose may be given at the facility of choice by the physician.
- Clinical rationale and documentation must be provided for review for exceptions. For administration in a Doctor's Office-Off Campus (Place of Service 19) or an On-Campus Outpatient Hospital (Place of Service 22) **ONE** of the following criteria must be met:
  - o Pediatric patients (under 21 years of age)
  - o Documented history of a severe reaction, which is defined as anaphylactic reaction, to this medication or any constituent of it
  - o Known cardiac condition (e.g. symptomatic cardiac arrhythmia) or pulmonary condition (e.g. significant respiratory disease, serious obstructive airway disease, %FVC ≤ 40%) that may

- increase the risk of an adverse reaction
- o Documented intolerance to this medication requiring constant telemetry monitoring of vitals
- o Unstable renal function which decreases the ability to respond to fluids
- o Difficult or unstable vascular access
- o Unsafe home environment
- o Acute mental status changes or cognitive conditions that impact the safety of infusion therapy
- o No access to emergency services

## I. INITIAL APPROVAL CRITERIA

Intravenous Immune Globulins may be considered medically necessary if one of the below conditions are met **AND** use is consistent with the medical necessity criteria that follows:

The following indications require IVIG to be requested by one of the following specialists:

- 1. Primary immunodeficiency and Chronic lymphocytic leukemia**
  - Allergist/Immunologist, Hematologist/Oncologist, or Infectious Disease Specialist
- 2. Idiopathic thrombocytopenia purpura (ITP)**
  - Hematologist/Oncologist
- 3. Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), Guillain-Barre Syndrome (Acute inflammatory polyneuropathy), Multifocal Motor Neuropathy, Myasthenia Gravis, and Relapsing-Remitting Multiple Sclerosis**
  - Neurologist
- 4. Dermatomyositis/Polymyositis**
  - Dermatologist or Rheumatologist

Coverage is provided in the following conditions:

### **Primary immunodeficiency (PID)/Wiskott - Aldrich syndrome †**

Such as: x-linked agammaglobulinemia, common variable immunodeficiency, transient hypogammaglobulinemia of infancy, IgG subclass deficiency with or without IgA deficiency, antibody deficiency with near normal immunoglobulin levels) and combined deficiencies (severe combined immunodeficiencies, ataxia-telangiectasia, x-linked lymphoproliferative syndrome) [***list not all inclusive***]

- Patient's IgG level is < 200 mg/dL **OR** both of the following
  - o Patient has a history of multiple hard to treat infections as indicated by at least **one** of the following:
    - Four or more ear infections within 1 year
    - Two or more serious sinus infections within 1 year
    - Two or more months of antibiotics with little effect
    - Two or more pneumonias within 1 year

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- Recurrent or deep skin abscesses
- Need for intravenous antibiotics to clear infections
- Two or more deep-seated infections including septicemia; **AND**
- The patient has a deficiency in producing antibodies in response to vaccination; **AND**
  - Titers were drawn before challenging with vaccination; **AND**
  - Titers were drawn between 4 and 8 weeks of vaccination

### **Immune thrombocytopenia/Idiopathic thrombocytopenia purpura (ITP) †**

For acute disease state:

- To manage acute bleeding due to severe thrombocytopenia (platelet counts less than  $30 \times 10^9/L$ ); **OR**
- To increase platelet counts prior to invasive surgical procedures such as splenectomy. (Platelets less than  $100 \times 10^9/L$ ); **OR**
- Patient has severe thrombocytopenia (platelet counts less than  $20 \times 10^9/L$ ) and is considered to be at risk for intracerebral hemorrhage

Note: Authorization is valid for 1 month only and cannot be renewed

### **Chronic Immune Thrombocytopenia (CIT):**

- The patient is at increased risk for bleeding as indicated by a platelet count less than  $30 \times 10^9/L$ ; **AND**
- History of failure, contraindication, or intolerance to corticosteroids; **AND**
- Duration of illness > 6 months; **AND**
- Member age  $\geq 2$  years

### **Chronic Inflammatory Demyelinating Polyneuropathy (CIDP) †**

- Patient's disease course is progressive or relapsing and remitting for 2 months or longer; **AND**
- Patient has abnormal or absent deep tendon reflexes in upper or lower limbs; **AND**
- Electrodiagnostic testing indicating demyelination; **AND**
  - Partial motor conduction block in at least two motor nerves or in 1 nerve plus one other demyelination criterion listed here in at least 1 other nerve; **OR**
  - Distal CMAP duration increase in at least 1 nerve plus one other demyelination criterion listed here in at least 1 other nerve; **OR**
  - Abnormal temporal dispersion conduction must be present in at least 2 motor nerves; **OR**
  - Reduced conduction velocity in at least 2 motor nerves; **OR**
  - Prolonged distal motor latency in at least 2 motor nerves; **OR**
  - Absent F wave in at least two motor nerves plus one other demyelination criterion listed here in at least 1 other nerve; **OR**
  - Prolonged F wave latency in at least 2 motor nerves; **AND**
- Cerebrospinal fluid analysis indicates the following:
  - CSF white cell count of  $<10 \text{ cells/mm}^3$ ; **AND**
  - CSF protein is elevated; **AND**
- Refractory or intolerant to corticosteroids (e.g., prednisolone, prednisone, etc.) given in therapeutic doses over at least three months; **AND**

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- Baseline in strength/weakness has been documented using an objective clinical measuring tool (e.g., INCAT, Medical Research Council (MRC) muscle strength, 6-MWT, Rankin, Modified Rankin, etc.)

Note: Initial authorization is valid for 3 months

#### **Guillain-Barre Syndrome (Acute inflammatory polyneuropathy) ‡**

- Disease is severe (i.e., patient requires assistance to ambulate); **AND**
- Onset of symptoms are recent (i.e., less than 1 month); **AND**
- Patient has abnormal or absent deep tendon reflexes in upper or lower limbs; **AND**
- Patient diagnosis is confirmed using a cerebrospinal fluid analysis; **AND**
- Approval will be granted for a maximum of 2 rounds of therapy within 6 weeks of onset

Note: Authorization is valid for 2 months only and cannot be renewed

#### **Multifocal Motor Neuropathy †**

- Patient has progressive multi-focal weakness (without sensory symptoms); **AND**
- Complete or partial conduction block or abnormal temporal dispersion conduction must be present in at least 2 nerves with accompanying normal sensory nerve conduction study across the same nerve that demonstrated the conduction block; **AND**
- Baseline in strength/weakness has been documented using an objective clinical measuring tool (e.g., INCAT, Medical Research Council (MRC) muscle strength, 6-MWT, Rankin, Modified Rankin, etc.)

Note: Initial authorization is valid for 3 months

#### **HIV infected children: Bacterial control or prevention ‡**

- Patient age does not exceed 13 years of age; **AND**
- Patient's IgG level is less than 400 mg/dL

#### **Myasthenia Gravis ‡**

- Patient has a positive serologic test for anti-acetylcholine receptor (AChR) antibodies; **AND**
- Patient has an acute exacerbation resulting in impending myasthenic crisis (i.e., respiratory compromise, acute respiratory failure, and/or bulbar compromise); **AND**
- Patient is failing on conventional immunosuppressant therapy alone (e.g., corticosteroids, azathioprine, cyclosporine, mycophenolate, methotrexate, tacrolimus, cyclophosphamide, etc.); **AND**
- Patient will be on combination therapy with corticosteroids or other immunosuppressant (e.g., azathioprine, mycophenolate, cyclosporine, methotrexate, tacrolimus, cyclophosphamide, etc.)

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Note: Authorization is valid for 1 course per month and it can be renewed on a case by case basis.

#### **Dermatomyositis/Polymyositis ‡**

- Patient has severe active disease; **AND**
- Patient has proximal weakness in all upper and/or lower limbs; **AND**
- Diagnosis has been confirmed by muscle biopsy; **AND**
- Patient has failed a trial of corticosteroids (i.e., prednisone); **AND**
- Patient has failed a trial of an immunosuppressant (e.g., methotrexate, azathioprine, etc.); **AND**
- Must be used as part of combination therapy with other agents; **AND**
- Patient has a documented baseline physical exam and muscular strength/function

Note: Initial authorization is valid for 3 months

#### **Complications of transplanted solid organ (kidney, liver, lung, heart, pancreas) and bone marrow transplant ‡**

Coverage is provided for one or more of the following (list not all-inclusive):

- Suppression of panel reactive anti-human leukocyte antigen (HLA) antibodies prior to transplantation
- Treatment of antibody-mediated rejection of solid organ transplantation
- Prevention or treatment of viral infections (e.g., cytomegalovirus, Parvo B-19 virus, and Polyoma BK virus)

#### **Stiff-Person Syndrome ‡**

- Patient has anti-glutamic acid decarboxylase (GAD) antibodies; **AND**
- Patient has failed at least 2 of the following treatments: benzodiazepines, baclofen, gabapentin, valproate, tiagabine, or levetiracetam; **AND**
- Patient has a documented baseline on physical exam

#### **Allogeneic Bone Marrow or Stem Cell Transplant ‡**

- Used for prevention of acute Graft-Versus-Host-Disease (aGVHD) or infection; **AND**
- Patient's BMT was allogeneic; **AND**
- Patient's IgG level is less than 400 mg/dL

Note: Initial authorization is valid for 3 months

#### **Kawasaki's disease (Pediatric) †**

Note: Authorization is valid for 1 course (1 month) only and cannot be renewed

**Fetal alloimmune thrombocytopenia (FAIT) ‡**

- Patient has a history of one or more of the following:
  - Previous FAIT pregnancy
  - Family history of the disease
  - Screening reveals platelet alloantibodies

Note: Authorization is valid through the delivery date only and cannot be renewed

**Neonatal Alloimmune Thrombocytopenia ‡**

Note: Authorization is valid for 1 course (1 month) only and cannot be renewed

**Auto-immune Mucocutaneous Blistering Diseases ‡**

- Patient has been diagnosed with one of the following:
  - Pemphigus vulgaris
  - Pemphigus foliaceus
  - Bullous Pemphigoid
  - Mucous Membrane Pemphigoid (a.k.a. Cicatricial Pemphigoid)
  - Epidermolysis bullosa acquisita
  - Pemphigus gestationis (Herpes gestationis)
  - Linear IgA dermatosis; **AND**
- Patient has severe disease that is extensive and debilitating; **AND**
- Diagnosis has been confirmed by biopsy; **AND**
- Patient's disease is progressive; **AND**
- Disease is refractory to a trial of conventional therapy with corticosteroids and concurrent immunosuppressive treatment (e.g., azathioprine, cyclophosphamide, mycophenolate mofetil, etc.); **AND**
- Patient has a documented baseline on physical exam

**Acquired Immune Deficiency secondary to Acute Lymphoblastic Leukemia (ALL) ‡**

- Used for prevention of infection; **AND**
- Patient age is less than 18 years old; **AND**
- Patient's IgG level is less than 400 mg/dL

**Acquired Immune Deficiency secondary to Chronic lymphocytic leukemia † or Multiple Myeloma ‡**

- Patient's IgG level is <200 mg/dL **OR both** of the following
- Patient has a history of multiple hard to treat infections as indicated by at least **one** of the following:
  - Four or more ear infections within 1 year
  - Two or more serious sinus infections within 1 year

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- Two or more months of antibiotics with little effect
- Two or more pneumonias within 1 year
- Recurrent or deep skin abscesses
- Need for intravenous antibiotics to clear infections
- Two or more deep-seated infections including septicemia; **AND**
- The patient has a deficiency in producing antibodies in response to vaccination; **AND**
  - Titers were drawn before challenging with vaccination; **AND**
  - Titers were drawn between 4 and 8 weeks of vaccination

Note: other secondary immunodeficiencies resulting in hypogammaglobulinemia and/or B-cell aplasia will be evaluated on a case-by-case basis

### **Toxic Shock Syndrome †**

Note: Authorization is valid for 1 course (1 month) only and cannot be renewed

### **Management of Immune-Checkpoint-Inhibitor Related Toxicity †**

- Patient has been receiving therapy with an immune checkpoint inhibitor (e.g. nivolumab, pembrolizumab, atezolizumab, avelumab, durvalumab, etc.); **AND**
- Patient has one of the following toxicities related to their immunotherapy:
  - Myasthenia gravis refractory to high-dose corticosteroids
  - Severe transverse myelitis
  - Moderate or severe Guillain-Barre Syndrome or peripheral neuropathy toxicity used in combination with pulse-dose methylprednisolone
  - Severe pneumonitis refractory to methylprednisolone after 48 hours of therapy
  - Encephalitis used in combination with pulse-dose methylprednisolone

### **Relapsing-Remitting Multiple Sclerosis**

- Failure or intolerance to standard therapies (interferons); **AND**
- Severe manifestations of relapsing-remitting MS (NOT primary or secondary progressive)

† FDA Approved Indication(s), ‡ Compendia/Literature Supported Indication(s)

### **PANDAS/PANS**

**As per Massachusetts DOI Bulletin 2021-06, coverage for the following indication will be covered for Massachusetts residents under the Commercial line of business, starting 1/1/2022:**

- Treatment of pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) and pediatric acute-onset neuropsychiatric syndrome (PANS).



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*For Reference Use Only				
Brand Name/ Formulation	FDA Indication	Contraindications	Product Specs	Comments
Asceniv (liquid)	PID (12 to 17 years of age)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> ≤200 mcg/ml <b>Osmolality:</b> N/A <b>Stabilizer:</b> glycine	Other stabilizer used is Polysorbate 80
Bivigam (liquid)	PID (peds ≥6)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> ≤200 mcg/ml <b>Osmolality:</b> 510 mOsm/kg <b>Stabilizer:</b> glycine	
Carimune NF (lyophilized)	PID (peds/adults) a/cITP (peds/adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> 1000-2000 mcg/mL (6% soln) <b>Osmolality:</b> 192 to 1074 mOsm/kg (depends on diluent and final conc) <b>Stabilizer:</b> sucrose	1.67 gm of sugar per gm of protein
Flebogamma 5% (liquid)	PID (peds ≥2)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> <50 mcg/mL <b>Osmolality:</b> 240 to 370 mOsm/kg <b>Stabilizer:</b> sorbitol	
Flebogamma 10% (liquid)	PID (peds ≥2) ITP (peds ≥2)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> <32 mcg/mL <b>Osmolality:</b> 240 to 370 mOsm/L <b>Stabilizer:</b> sorbitol	
Gammagard (liquid)	PID (peds ≥2) MMN (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> 37 mcg/mL <b>Osmolality:</b> 240 to 300 mOsm/kg <b>Stabilizer:</b> glycine	May be used SC (see policy for criteria)
Gammagard S/D (lyophilized)	PID ITP CLL Kawasaki (adults/peds for all indx)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> <1 mcg/mL (5% solution) <b>Osmolality:</b> 636 mOsm/L (5% soln) <b>Stabilizer:</b> glycine	Contains some sugar (20mg/mL when prepared)
Gammaked (liquid)	PID (peds ≥2) ITP (peds/adults) CIDP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> 46 mcg/mL <b>Osmolality:</b> 258 mOsm/kg <b>Stabilizer:</b> glycine	May be used SC (see policy for criteria)
Gammaplex 5% (liquid)	PID (peds ≥2) cITP (adults)	History of anaphylaxis to IgG	<b>IgA:</b> <10 mcg/mL	Other stabilizer

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		IgA-deficient with IgA antibodies Fructose intolerance	<b>Osmolality:</b> 420 to 500 mOsm/kg <b>Stabilizer:</b> glycine	used is Polysorbate 80
Gammalex 10% (liquid)	PID (adults) cITP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> <20 mcg/mL <b>Osmolality:</b> 280 mOsm/kg <b>Stabilizer:</b> glycine	Other stabilizer used is Polysorbate 80
Gamunex-C (liquid)	PID (peds ≥2) ITP (peds/adults) CIDP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> 46 mcg/mL <b>Osmolality:</b> 258 mOsm/kg <b>Stabilizer:</b> glycine	May be used SC (see policy for criteria)
Octagam 5% (liquid)	PID (peds ≥6)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies Corn allergy	<b>IgA:</b> ≤200 mcg/mL <b>Osmolality:</b> 310 to 380 mOsm/kg <b>Stabilizer:</b> maltose	
Octagam 10% (liquid)	ITP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> 106 mcg/mL <b>Osmolality:</b> 310 to 390 mOsm/kg <b>Stabilizer:</b> maltose	
Privigen (liquid)	PID cITP (ped ≥15) CIDP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies Hyperprolinemia	<b>IgA:</b> ≤25 mcg/mL <b>Osmolality:</b> 320 mOsm/kg <b>Stabilizer:</b> L-proline	
Panzyga	PID (peds ≥2) cITP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<b>IgA:</b> ≤100 mcg/mL <b>Osmolality:</b> 240-310 mOsm/kg <b>Stabilizer:</b> Glycine	
<ul style="list-style-type: none"> <li>– All intravenous immunoglobulins are derived from human plasma.</li> <li>– Products with higher IgA content pose a greater risk for anaphylactic reactions, especially in patients with IgA deficiencies.</li> <li>– All products may predispose patients to nephrotoxicity especially those with sugar-based or proline-based stabilizers. To lower risks, lower concentration products and infusions rates should be used as well as using products with osmolality/osmolality that is near physiologic range (around 300 mOsm/kg or mOsm/L).</li> <li>– Premedications (e.g., acetaminophen, antihistamine, etc.) are recommended to reduce the risk of infusion related reactions.</li> </ul>				
<p>– Adapted from: Professional Resource, Comparison of IVIG Products. Pharmacist's Letter/Prescriber's Letter. December 2016.</p>				

**II. RENEWAL CRITERIA**

Note: unless otherwise specified, renewal authorizations are provided for 1 year

Coverage can be renewed based upon the following criteria:

- Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include the following: acute kidney injury, thrombosis, hemolysis, hypersensitivity, pulmonary adverse reactions, volume overload, etc.; **AND**
- Patient meets the disease-specific criteria identified below:

#### **Primary Immunodeficiency (PID)**

- Disease response as evidenced by one or more of the following:
  - Decrease in the frequency of infection
  - Decrease in the severity of infection

#### **Chronic Immune Thrombocytopenia/ITP**

- Disease response as indicated by the achievement and maintenance of a platelet count of at least  $50 \times 10^9/L$  as necessary to reduce the risk for bleeding

#### **Chronic Inflammatory Demyelinating Polyneuropathy**

- Renewals will be authorized for patients that have demonstrated a clinical response to therapy based on an objective clinical measuring tool (e.g., INCAT, Medical Research Council (MRC) muscle strength, 6-MWT, Rankin, Modified Rankin, etc.)

#### **Multifocal Motor Neuropathy**

- Renewals will be authorized for patients that have demonstrated a clinical response to therapy based on an objective clinical measuring tool (e.g., INCAT, Medical Research Council (MRC) muscle strength, 6-MWT, Rankin, Modified Rankin, etc.)

#### **HIV infected children: Bacterial control or prevention**

- Disease response as evidenced by one or more of the following:
  - Decrease in the frequency of infection
  - Decrease in the severity of infection; **AND**
- Patient continues to be at an increased risk of infection necessitating continued therapy

#### **Dermatomyositis/Polymyositis**

- Patient had an improvement from baseline on physical exam and/or muscular strength and function

Note: Renewal authorizations are provided for 6 months

#### **Complications of transplanted solid organ (kidney, liver, lung, heart, pancreas) and bone marrow transplant**

- Disease response as evidenced by one or more of the following:
  - Decrease in the frequency of infection

- Decrease in the severity of infection; **AND**
- Patient continues to be at an increased risk of infection necessitating continued therapy

**Stiff Person Syndrome**

- Documented improvement from baseline on physical exam

**Allogeneic Bone Marrow or Stem Cell Transplant**

- Patient's IgG trough is less than 400 mg/dL

Note: Renewal authorizations are provided for 3 months

**Auto-Immune Mucocutaneous Blistering Diseases**

- Documented improvement from baseline on physical exam

Note: Renewal authorizations are provided for 6 months

**Acquired Immune Deficiency secondary to Chronic Lymphocytic Leukemia or Multiple Myeloma**

- Disease response as evidenced by one or more of the following:
  - Decrease in the frequency of infection
  - Decrease in the severity of infection; **AND**
- Patient continues to be at an increased risk of infection necessitating continued therapy

**Acquired Immune Deficiency secondary to Acute Lymphoblastic Leukemia (ALL)**

- Disease response as evidenced by one or more of the following:
  - Decrease in the frequency of infection
  - Decrease in the severity of infection; **AND**
- Patient continues to be at an increased risk of infection necessitating continued therapy

**Management of Immune Checkpoint Inhibitor related Toxicity ‡**

- May not be renewed.

Note: Renewal authorizations are provided for 6 months where applicable

Dosing Recommendations:

- Patient's dose should be reduced to the lowest necessary to maintain benefit for their condition. Patients who are stable, or who have reached the maximum therapeutic response, should have a trial of dose reduction (e.g., 25-50% reduction in dose every 3 months).
- Patients who have tolerated dose reduction and continue to show sustained improvement (i.e. remission) should have a trial of treatment discontinuation; with the following exceptions:

- PID would be excluded from a trial of discontinuation
- HIV-infected children should show satisfactory control of the underlying disease [e.g., undetectable viral load, CD4 counts elevated above 200 or >15% (ages 9 months – 5 years) on antiretroviral therapy, etc.]
- Solid organ transplant, CLL, and MM patients should not be at an increased risk of infection

### III. DOSAGE/ADMINISTRATION

Dosing should be calculated using adjusted body weight if one or more of the following criteria are met:

- Patient’s body mass index (BMI) is 30 kg/m<sup>2</sup> or more; **OR**
- Patient’s actual body weight is 20% higher than his or her ideal body weight (IBW)

Use the following dosing formulas to calculate the adjusted body weight (round dose to nearest 5-gram increment in adult patients):

Dosing formulas
BMI = 703 x (weight in pounds/height in inches <sup>2</sup> )
IBW (kg) for males = 50 + [2.3 (height in inches – 60)]
IBW (kg) for females = 45.5 + [2.3 x (height in inches – 60)]
Adjusted body weight = IBW + 0.5 (actual body weight – IBW)

This information is not meant to replace clinical decision making when initiating or modifying medication therapy and should only be used as a guide. Patient-specific variables should be taken into account.

Indication	Dose
PID	200 to 800 mg/kg every 21 to 28 days
CIDP	2 g/kg divided over 2-5 days initially, then 1 g/kg administered in 1-2 infusions every 21 days
ITP	2 g/kg divided over 5 days or 1 g/kg once daily for 2 consecutive days in a 28-day cycle
FAIT	1 g/kg/week until delivery
Kawasaki’s Disease (Pediatric Patients)	1 g/kg to 2 g/kg x 1 course

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Indication	Dose
Multifocal Motor Neuropathy	Up to 2 g/kg divided over 5 days in a 28-day cycle
Acquired immune deficiency: CLL, MM and ALL	400 mg/kg every 3 to 4 weeks
Pediatric HIV	400 mg/kg every 2 to 4 weeks
Guillain-Barre	2 g/kg divided over 5 days x 1 course
Myasthenia Gravis	1-2 g/kg divided as either 0.5 g/kg daily x 2 days or 0.4 g/kg daily x 5 days x 1 course
Auto-immune blistering diseases	Up to 2 g/kg divided over 5 days in a 28-day cycle
Dermatomyositis/Polymyositis	2 g/kg divided over 2 to 5 days in a 28-day cycle
Bone Marrow or Stem Cell Transplant	500 mg/kg once weekly x 90 days, then 500 mg/kg every 3 to 4 weeks
Complications of transplanted solid organ: (kidney, liver, lung, heart, pancreas) transplant	2 g/kg divided over 5 days in a 28-day cycle
Stiff Person	2 g/kg divided over 5 days in a 28-day cycle
Toxic shock syndrome	2 g/kg divided over 5 days x 1 course
Neonatal Alloimmune Thrombocytopenia	1 g/kg x 1 dose, may be repeated once if needed
Management of Immune Checkpoint Inhibitor Related Toxicity	2 g/kg divided over 5 days x 1 course
PANDAS/PANS	2 g/kg (maximum dose up to 120 g) OR as supported by literature
<i>*Dosing for IVIG is highly variable depending on numerous patient specific factors, indication(s), and the specific product selected. For specific dosing regimens refer to current prescribing literature.</i>	

**IV. Limitations/Exclusions**

Immune Globulins (immunoglobulin) is not considered medically necessary for indications other than those listed above due to insufficient evidence of therapeutic value.

**APPLICABLE PROCEDURE CODES AND APPLICABLE NDCS**

Drug	Manufacturer	J-Code C-Code	1 Billable Unit Equivalent	IgG (grams) per SDV	NDC
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Asceniv	ADMA Biologics	J1554	500 mg	5	69800-0250-XX
		C9072	500 mg		
Bivigam	Biotest Pharmaceuticals	J1556	500 mg	5	59730-6502-XX
				10	59730-6503-XX
Carimune NF	CSL Behring AG	J1566	500 mg	6	44206-0417-XX
				12	44206-0418-XX
Flebogamma 10% DIF	Instituto Grifols, S.A.	J1572	500 mg	5, 10, 20	61953-0005-XX
Flebogamma 5% DIF				2.5, 5, 10, 20	61953-0004-XX
Gamunex-C	Grifols Therapeutics	J1561	500 mg	1, 2.5, 5, 10, 20, 40	13533-0800-XX
Gammagard Liquid	Baxalta	J1569	500 mg	1, 2.5, 5, 10, 20, 30	00944-2700-XX
Gammagard S/D Less IGA	Baxalta	J1566	500 mg	5	00944-2656-XX
				10	00944-2658-XX
Gammaked	Grifols Therapeutics	J1561	500 mg	1, 2.5, 5, 10, 20	76125-0900-XX
Gammaplex 5%	Bio Products Laboratory	J1557	500 mg	5, 10, 20	64208-8234-XX
Gammaplex 10%				5, 10, 20	64208-8235-XX
Octagam 10%	Octapharma USA Inc	J1568	500 mg	2, 5, 10, 20	68982-0850-XX
Octagam 5%				1, 2.5, 5, 10, 25	68982-0840-XX
Privigen	CSL Behring LLC	J1459	500 mg	5	44206-0436-XX
				10	44206-0437-XX
				20	44206-0438-XX
				40	44206-0439-XX

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Panzyga	Octapharma USA Inc	J1599	500mg	1, 2.5, 5, 10, 20, 30	68982-0820-XX
Injection, immune globulin, intravenous, non-lyophilized (e.g., liquid), not otherwise specified	N/A	J1599	500 mg	N/A	N/A

**APPLICABLE DIAGNOSIS CODES**

A48.3	Toxic shock syndrome
B20	Human immunodeficiency virus (HIV) disease
B25.0	Cytomegaloviral pneumonitis
B25.1	Cytomegaloviral hepatitis
B25.2	Cytomegaloviral pancreatitis
B25.8	Other cytomegaloviral diseases
B25.9	Cytomegaloviral disease, unspecified
C91.10	Chronic lymphocytic leukemia of B-cell type not having achieved remission
C91.11	Chronic lymphocytic leukemia of B-cell type in remission
C91.12	Chronic lymphocytic leukemia of B-cell type in relapse
C90.00	Multiple Myeloma not having achieved remission
C90.01	Multiple Myeloma in remission
C90.02	Multiple Myeloma in relapse
C90.10	Plasma cell leukemia not having achieved remission
C90.11	Plasma cell leukemia in remission
C90.12	Plasma cell leukemia in relapse
C90.00	Acute lymphoblastic leukemia not having achieved remission
C90.01	Acute lymphoblastic leukemia, in remission
C90.02	Acute lymphoblastic leukemia, in relapse
D69.3	Immune thrombocytopenic purpura



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D69.41	Evans syndrome
D69.42	Congenital and hereditary thrombocytopenic purpura
D69.49	Other primary thrombocytopenia
D69.59	Other secondary thrombocytopenia
D80.0	Hereditary hypogammaglobulinemia
D80.1	Nonfamilial hypogammaglobulinemia
D80.3	Selective deficiency of immunoglobulin G [IgG] subclasses
D80.5	Immunodeficiency with increased immunoglobulin M [IgM]
D80.7	Transient hypogammaglobulinemia of infancy
D81.0	Severe combined immunodeficiency [SCID] with reticular dysgenesis
D81.1	Severe combined immunodeficiency [SCID] with low T- and B-cell numbers
D81.2	Severe combined immunodeficiency [SCID] with low or normal B-cell numbers
D81.6	Major histocompatibility complex class I deficiency
D81.7	Major histocompatibility complex class II deficiency
D81.89	Other combined immunodeficiencies
D81.9	Combined immunodeficiency, unspecified
D82.0	Wiskott-Aldrich syndrome
D82.1	DiGeorge's syndrome
D83.0	Common variable immunodeficiency with predominant abnormalities of B-cell numbers and function
D83.2	Common variable immunodeficiency with autoantibodies to B- or T-cells
D83.8	Other common variable immunodeficiencies
D83.9	Common variable immunodeficiency, unspecified
D89.81	Acute graft-versus-host disease
D89.81	Acute on chronic graft-versus-host disease
D89.89	Other specified disorders involving the immune mechanism, not elsewhere classified
G03.8	Meningitis due to other specified causes
G03.9	Meningitis, unspecified
G04.81	Other encephalitis and encephalomyelitis
G04.89	Other myelitis
G04.90	Encephalitis and encephalomyelitis, unspecified
G04.91	Myelitis, unspecified

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G25.82	Stiff-man syndrome
G35	Multiple Sclerosis
G56.80	Other specified mononeuropathies of unspecified upper limb
G56.81	Other specified mononeuropathies of right upper limb
G56.82	Other specified mononeuropathies of left upper limb
G56.83	Other specified mononeuropathies of bilateral upper limbs
G56.90	Unspecified mononeuropathy of unspecified upper limb
G56.91	Unspecified mononeuropathy of right upper limb
G56.92	Unspecified mononeuropathy of left upper limb
G56.93	Unspecified mononeuropathy of bilateral upper limbs
G57.80	Other specified mononeuropathies of unspecified lower limb
G57.81	Other specified mononeuropathies of right lower limb
G57.82	Other specified mononeuropathies of left lower limb
G57.83	Other specified mononeuropathies of bilateral lower limbs
G57.90	Unspecified mononeuropathy of unspecified lower limb
G57.91	Unspecified mononeuropathy of right lower limb
G57.92	Unspecified mononeuropathy of left lower limb
G57.93	Unspecified mononeuropathy of bilateral lower limbs
G61.0	Guillain-Barre syndrome
G61.1	Serum neuropathy
G61.81	Chronic inflammatory demyelinating polyneuritis
G61.82	Multifocal motor neuropathy
G61.89	Other inflammatory polyneuropathies
G61.9	Inflammatory polyneuropathy, unspecified
G62.89	Other specified polyneuropathies
G70.00	Myasthenia gravis without (acute) exacerbation
G70.01	Myasthenia gravis with (acute) exacerbation
G90.09	Other idiopathic peripheral autonomic neuropathy
J70.2	Acute drug-induced interstitial lung disorders
J70.4	Drug-induced interstitial lung disorders, unspecified
L10.0	Pemphigus vulgaris

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L10.2	Pemphigus foliaceus
L12.0	Bullous pemphigoid
L12.1	Cicatricial pemphigoid
L12.30	Acquired epidermolysis bullosa, unspecified
L12.31	Epidermolysis bullosa due to drug
L12.35	Other acquired epidermolysis bullosa
L12.5	Other acquired epidermolysis bullosa
L13.8	Other specified bullous disorders
M30.3	Mucocutaneous lymph node syndrome [Kawasaki]
M33.00	Juvenile dermatomyositis, organ involvement unspecified
M33.01	Juvenile dermatomyositis with respiratory involvement
M33.02	Juvenile dermatomyositis with myopathy
M33.03	Juvenile dermatomyositis without myopathy
M33.09	Juvenile dermatomyositis with other organ involvement
M33.10	Other dermatomyositis, organ involvement unspecified
M33.11	Other dermatomyositis with respiratory involvement
M33.12	Other dermatomyositis with myopathy
M33.13	Other dermatomyositis without myopathy
M33.19	Other dermatomyositis with other organ involvement
M33.20	Polymyositis, organ involvement unspecified
M33.21	Polymyositis with respiratory involvement
M33.22	Polymyositis with myopathy
M33.29	Polymyositis with other organ involvement
M33.90	Dermatopolymyositis, unspecified, organ involvement unspecified
M33.91	Dermatopolymyositis, unspecified with respiratory involvement
M33.92	Dermatopolymyositis, unspecified with myopathy
M33.93	Dermatopolymyositis, unspecified without myopathy
M33.99	Dermatopolymyositis, unspecified with other organ involvement
M36.0	Dermato(poly)myositis in neoplastic disease
O26.40	Herpes gestationis, unspecified trimester
O26.41	Herpes gestationis, first trimester

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O26.42	Herpes gestationis, second trimester
O26.43	Herpes gestationis, third trimester
P61.0	Transient neonatal thrombocytopenia
T86.00	Unspecified complication of bone marrow transplant
T86.01	Bone marrow transplant rejection
T86.02	Bone marrow transplant failure
T86.03	Bone marrow transplant infection
T86.09	Other complications of bone marrow transplant
T86.10	Unspecified complication of kidney transplant
T86.11	Kidney transplant rejection
T86.12	Kidney transplant failure
T86.13	Kidney transplant infection
T86.19	Other complication of kidney transplant
T86.20	Unspecified complication of heart transplant
T86.21	Heart transplant rejection
T86.22	Heart transplant failure
T86.23	Heart transplant infection
T86.290	Cardiac allograft vasculopathy
T86.298	Other complications of heart transplant
T86.30	Unspecified complication of heart-lung transplant
T86.31	Heart-lung transplant rejection
T86.32	Heart-lung transplant failure
T86.33	Heart-lung transplant infection
T86.39	Other complications of heart-lung transplant
T86.40	Unspecified complication of liver transplant
T86.41	Liver transplant rejection
T86.42	Liver transplant failure
T86.43	Liver transplant infection
T86.49	Other complications of liver transplant
T86.810	Lung transplant rejection
T86.811	Lung transplant failure

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T86.812	Lung transplant infection
T86.818	Other complications of lung transplant
T86.819	Unspecified complication of lung transplant
T86.890	Other transplanted tissue rejection
T86.891	Other transplanted tissue failure
T86.892	Other transplanted tissue infection
T86.898	Other complications of other transplanted tissue
T86.899	Unspecified complication of other transplanted tissue
Z48.21	Encounter for aftercare following heart transplant
Z48.22	Encounter for aftercare following kidney transplant
Z48.23	Encounter for aftercare following liver transplant
Z48.24	Encounter for aftercare following lung transplant
Z48.280	Encounter for aftercare following heart-lung transplant
Z48.290	Encounter for aftercare following bone marrow transplant
Z94.0	Kidney transplant status
Z94.1	Heart transplant status
Z94.2	Lung transplant status
Z94.3	Heart and lungs transplant status
Z94.4	Liver transplant status
Z94.81	Bone marrow transplant status
Z94.83	Pancreas transplant status
Z94.84	Stem cells transplant status

**V. REVISION HISTORY**

7/22/2021	<ul style="list-style-type: none"> <li>Added PANDAS/PANS coverage as per Massachusetts DOI Bulletin 2021-06 for Massachusetts residents under the Commercial line of business, starting 1/1/2022</li> </ul>
7/2/2021	<ul style="list-style-type: none"> <li>Updated Aceniv code to J1554</li> </ul>
4/6/2021	<ul style="list-style-type: none"> <li>Removed BUN/SCr requirement from criteria</li> </ul>
1/1/2021	<ul style="list-style-type: none"> <li>Added C-Code: C9072 Injection, immune globulin (asceniv), 500 mg</li> </ul>
9/11/2020	<ul style="list-style-type: none"> <li>Removed the following statement from Renewal criteria: Patient continues to meet criteria identified in section I above;</li> </ul>
02/06/2020	<ul style="list-style-type: none"> <li>For myasthenia gravis indication, we changed the approval from 1 course per 28 days and cannot be renewed. To 1 course per 28 days and it can be renewed on a case by case basis (approved in Medical Policy Subcommittee on 02/06/2020).</li> </ul>
01/26/2020	<ul style="list-style-type: none"> <li>Added Asceniv J-code J1599 and applicable NDC</li> </ul>
09/11/2019	<ul style="list-style-type: none"> <li>Added Mandatory Site of Service, effective 04/01/2020 (Effected lines of business: Commercial and Healthcare Exchange). Other lines of business pending further review.</li> </ul>

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