

Immune Globulins (immunoglobulin) (Intravenous)

Document Number: MODA-0071

Last Review Date: 10/02/2018

Date of Origin: 07/20/2010

Dates Reviewed: 09/2010, 12/2010, 02/2011, 03/2011, 06/2011, 09/2011, 10/2011, 12/2011, 03/2012, 06/2012, 09/2012, 12/2012, 03/2013, 05/2013, 06/2013, 09/2013, 12/2013, 03/2014, 06/2014, 09/2014, 12/2014, 03/2015, 06/2015, 09/2015, 12/2015, 03/2016, 06/2016, 09/2016, 12/2016, 03/2017, 06/2017, 09/2017, 12/2017, 03/2018, 06/2018, 09/2018, 10/2018

I. Length of Authorization

- Initial and renewal authorization periods vary by specific covered indication.
- Unless otherwise specified, the initial authorization will be provided for 6 months and may be renewed.

II. Dosing Limits

A. Quantity Limit (max daily dose) [Pharmacy Benefit]:

Drug	Vial size in IgG grams	# of vials	
		One time only	per 28 days
		LOAD	MAINTENANCE
Bivigam	5	1	1
	10	23	23
Carimune NF	3,6	1	1
	12	19	19
Flebogamma 10% DIF	5, 10, 20	1	1
	20	11	11
Flebogamma 5% DIF	2.5, 5, 10	1	1
	20	11	11
Gamunex-C	1, 2.5, 5, 10, 20	1	1
	40	6	6
Gammagard Liquid	1, 2.5, 5, 10, 20	1	1
	30	8	8
Gammagard S/D	5	1	1
	10	23	23
Gammaked	1, 2.5, 5, 10	1	1
	20	11	11
Gammaplex	2.5, 5, 10	1	1
	20	11	11
Octagam 10%	2, 5, 10	1	1
	20	11	11
	1, 2.5, 5, 10	1	1

Octagam 5%	25	9	9
Privigen	5, 10, 20	1	1
	40	6	6
Panzyga	1, 2.5, 5, 10, 20	1	1
	30	8	8

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

Indication	Billable Units	Per # days (unless otherwise specified)
PID	184	21
CIDP	Load: 460	4
	Maintenance: 230	21
Immune thrombocytopenia/ITP	460	28
FAIT	200	7
Kawasaki's Disease (<i>Pediatric Patients only</i>)	232	1 dose only
Multifocal Motor Neuropathy	460	28
CLL/MM	92	21
ALL	92	21
HIV (<i>Pediatric Patients only</i>)	47	28
Guillain-Barre	460	5 (<i>for one cycle only</i>)
Myasthenia Gravis	460	28
Auto-immune blistering diseases	460	28
Bone Marrow or Stem Cell Transplant	115	7
Dermatomyositis/Polymyositis	460	28
Complications of transplanted solid organ (<i>kidney, liver, lung, heart and pancreas transplants</i>)	460	28
Stiff Person	460	28
Toxic shock syndrome	460	5 (<i>for one cycle only</i>)
NAIT	16	2 doses only
Management of Immune Checkpoint Inhibitor Related Toxicity	460	5 (<i>for one cycle only</i>)

III. Initial Approval Criteria

Site of care specialty infusion program requirements are met (refer to [Moda Site of Care Policy](#)).

Coverage is provided in the following conditions:

- Baseline values for BUN and serum creatinine obtained within 30 days of request; **AND**

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
 - 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
 - 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 X 10⁹/L); **OR**
- To increase platelet counts prior to invasive surgical procedures such as splenectomy. (Platelets less than 100 X 10⁹/L); **OR**
- Patient has severe thrombocytopenia (platelet counts less than 20 X 10⁹/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 X 10⁹/L; **AND**
- History of failure, contraindication, or intolerance to corticosteroids; **AND**
- Duration of illness > 6 months; **AND**
- Patient age ≥ 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:
 - 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 cells/mm³; **AND**
 - CSF protein is elevated; **AND**
- Patient is refractory or intolerant to corticosteroids (e.g., prednisolone, prednisone, etc.) given in therapeutic doses over at least three months; **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

Guillain-Barre Syndrome (Acute inflammatory polyneuropathy) ‡

- Patient's 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.)

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

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 aquisita
 - 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
 - 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

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

*For Reference Use Only				
Brand Name/ Formulation	FDA Indication	Contraindications	Product Specs	Comments
Bivigam (liquid)	PID (peds ≥6)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<ul style="list-style-type: none"> • IgA: ≤200 mcg/mL • Osmolality: 510 mOsm/kg • Stabilizer: glycine 	
Carimune NF (lyophilized)	PID (peds/adults) a/cITP (peds/adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<ul style="list-style-type: none"> • IgA: 1000-2000 mcg/mL (6% soln) • Osmolality: 192 to 1074 mOsm/kg (depends on diluent and final conc) • Stabilizer: 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	<ul style="list-style-type: none"> IgA: <50 mcg/mL Osmolarity: 240 to 370 mOsm/kg Stabilizer: sorbitol 	
Flebogamma 10% (liquid)	PID (peds ≥2) ITP (peds ≥2)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<ul style="list-style-type: none"> IgA: <32 mcg/mL Osmolarity: 240 to 370 mOsm/L Stabilizer: sorbitol 	
Gammagard (liquid)	PID (peds ≥2) MMN (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	<ul style="list-style-type: none"> IgA: 37 mcg/mL Osmolality: 240 to 300 mOsm/kg Stabilizer: 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	<ul style="list-style-type: none"> IgA: <1 mcg/mL (5% solution) Osmolality: 636 mOsm/L (5% soln) Stabilizer: 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	<ul style="list-style-type: none"> IgA: 46 mcg/mL Osmolality: 258 mOsm/kg Stabilizer: glycine 	May be used SC (see policy for criteria)
Gammaplex 5% (liquid)	PID (peds ≥2) cITP (adults)	History of anaphylaxis to IgG	IgA : <10 mcg/mL	Other stabilizer used is Polysorbate 80

		IgA-deficient with IgA antibodies Fructose intolerance	Osmolality: 420 to 500 mOsm/kg Stabilizer: glycine	
Gammaflex 10% (liquid)	PID (adults) cITP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	IgA: <20 mcg/mL Osmolality: 280 mOsm/kg Stabilizer: 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	IgA: 46 mcg/mL Osmolality: 258 mOsm/kg Stabilizer: 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	IgA: ≤200 mcg/mL Osmolality: 310 to 380 mOsm/kg Stabilizer: maltose	
Octagam 10% (liquid)	ITP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	IgA: 106 mcg/mL Osmolality: 310 to 390 mOsm/kg Stabilizer: maltose	
Privigen (liquid)	PID cITP (ped ≥15) CIDP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies Hyperprolinemia	IgA: ≤25 mcg/mL Osmolality: 320 mOsm/kg Stabilizer: L-proline	
Panzyga	PID (peds ≥2) cITP (adults)	History of anaphylaxis to IgG IgA-deficient with IgA antibodies	IgA: ≤100 mcg/mL Osmolality: 240-310 mOsm/kg Stabilizer: Glycine	
<p>– All intravenous immunoglobulins are derived from human plasma.</p> <p>– Products with higher IgA content pose a greater risk for anaphylactic reactions, especially in patients with IgA deficiencies.</p> <p>– 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/osmolarity that is near physiologic range (around 300 mOsm/kg or mOsm/L).</p> <p>– Premedications (e.g., acetaminophen, antihistamine, etc) are recommended to reduce the risk of infusion related reactions.</p>				
<p><i>Adapted from: Professional Resource, Comparison of IVIG Products. Pharmacist's Letter/Prescriber's Letter. December 2016.</i></p>				

IV. Renewal Criteria

Coverage can be renewed based upon the following criteria:

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

- Patient continues to meet criteria identified in section III; **AND**
- 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**
- BUN and serum creatinine have been obtained within the last 6 months and the concentration and rate of infusion have been adjusted accordingly; **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

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

V. 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/m² 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 = $703 \times (\text{weight in pounds}/\text{height in inches}^2)$
IBW (kg) for males = $50 + [2.3 (\text{height in inches} - 60)]$
IBW (kg) for females = $45.5 + [2.3 \times (\text{height in inches} - 60)]$
Adjusted body weight = $IBW + 0.5 (\text{actual body weight} - IBW)$

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
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

Indication	Dose
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
<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>	

VI. Billing Code/Availability Information

HCPCS code & NDC:

Drug	Manufacturer	J-Code	1 Billable Unit Equivalent	IgG (grams) per SDV	NDC
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
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

VII. References

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Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
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

ICD-10	ICD-10 Description
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
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
D89.810	Acute graft-versus-host disease
D89.812	Acute on chronic graft-versus-host disease
G03.8	Meningitis due to other specified causes
G03.9	Meningitis, unspecified
G04.81	Other encephalitis and encephalomyelitis

ICD-10	ICD-10 Description
G04.89	Other myelitis
G04.90	Encephalitis and encephalomyelitis, unspecified
G04.91	Myelitis, unspecified
G25.82	Stiff-man syndrome
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
L10.2	Pemphigus foliaceus
L12.0	Bullous pemphigoid
L12.1	Cicatricial pemphigoid
L12.30	Acquired epidermolysis bullosa, unspecified

ICD-10	ICD-10 Description
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
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

ICD-10	ICD-10 Description
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
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

ICD-10	ICD-10 Description
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

**G61.81 is not payable when associated with diabetes mellitus, dysproteinemias, renal failure, or malnutrition*

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: <http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx>. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

Jurisdiction(s): N	NCD/LCD/Article Document (s): L34007
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34007&bc=gAAAAAAAAAAAAAA ==	
Jurisdiction(s): F	NCD/LCD/Article Document (s): L34074
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34074&bc=gAAAAAAAAAAAAAA ==	
Jurisdiction(s): L; H	NCD/LCD/Article Document (s): L35093
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L35093&bc=gAAAAAAAAAAAAAA ==	
Jurisdiction(s): E	NCD/LCD/Article Document (s): L34314
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34314&bc=gAAAAAAAAAAAAAA ==	
Jurisdiction(s): 5, 8	NCD/LCD/Article Document (s): L34771
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34771&bc=gAAAAAAAAAAAAAA ==	

Jurisdiction(s): J, M	NCD/LCD/Article Document (s): L34580
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34580&bc=gAAAAAAAAAAAAAA==	

Jurisdiction(s): ALL	NCD/LCD/Article Document (s): 250.3
https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=158&ncdver=1&DocID=250.3&bc=gAAAABAAAAAAAAAA%3d%3d&	

Jurisdiction(s): 15	NCD/LCD/Article Document (s): L35891
https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L35891&bc=gAAAAAAAAAAAAAA==	

Jurisdiction(s): E	NCD/LCD/Article Document (s): A54641, A54643
https://www.cms.gov/medicare-coverage-database/search/article-date-search.aspx?DocID=A54641&bc=gAAAAAAAAAAAAAA==	
https://www.cms.gov/medicare-coverage-database/search/article-date-search.aspx?DocID=A54643&bc=gAAAAAAAAAAAAAA==	

Jurisdiction(s): E	NCD/LCD/Article Document (s): A54660, A54662
https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=A54660&bc=gAAAAAAAAAAAAAA%3d%3d&	
https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=A54662&bc=gAAAAAAAAAAAAAA%3d%3d&	

Jurisdiction(s): 6, K	NCD/LCD/Article Document (s): A52446
https://www.cms.gov/medicare-coverage-database/search/article-date-search.aspx?DocID=A52446&bc=gAAAAAAAAAAAAAA==	

Medicare Part B Administrative Contractor (MAC) Jurisdictions

Jurisdiction	Applicable State/US Territory	Contractor
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corporation (WPS)
6	MN, WI, IL	National Government Services, Inc. (NGS)
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.
8	MI, IN	Wisconsin Physicians Service Insurance Corporation (WPS)
N (9)	FL, PR, VI	First Coast Service Options, Inc.
J (10)	TN, GA, AL	Palmetto GBA, LLC
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA, LLC

Medicare Part B Administrative Contractor (MAC) Jurisdictions

Jurisdiction	Applicable State/US Territory	Contractor
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)
15	KY, OH	CGS Administrators, LLC