

POLICY AND PROCEDURE

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: *12/17*

PAGE NUMBER: 1 of 17

POLICY TITLE: Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin (SCIG)
DEPARTMENT: Clinical Pharmacy Services- Utilization Management
ORIGINAL DATE: July 2007

Last P & T Committee Approval Date: February 2018

Product Applicability: mark all applicable products below:

COMMERCIAL	<input type="checkbox"/> HMO <input type="checkbox"/> PPO Products: <input type="checkbox"/> Small Exchange: <input type="checkbox"/> Shop <input checked="" type="checkbox"/> All <input type="checkbox"/> Indiv. <input type="checkbox"/> Indiv. <input type="checkbox"/> Large
OTHER	<input checked="" type="checkbox"/> Self-funded/ASO

PURPOSE

The purpose of this policy is to define the prior authorization process for all commercially-available, formulary IVIG and SCIG products.

DEFINITIONS

INCAT (Inflammatory Neuropathy Cause and Treatment Scale) – is used to assess functional disability of both upper and lower extremities in chronic inflammatory demyelinating polyradiculoneuropathy (CIDP).

Grade	Arm Disability
0	No upper limb problems
1	Symptoms, in one or both arms, not affecting the ability to perform any of the following functions: doing all zips and buttons; washing or brushing hair; using a knife and fork together; an handling small coins
2	Symptoms, in one arm or both arms, affecting but not preventing any of the above-mentioned functions
3	Symptoms, in one arm or both arms, preventing one or two of the above-mentioned functions
4	Symptoms, in one arm or both arms, preventing three or all of the functions listed, but some purposeful movements still possible
5	Inability to use either arm for any purposeful movement
Grade	Leg Disability

Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 2 of 17

0	Walking not affected
1	Walking affected, but walks independently outdoors
2	Usually uses unilateral support (stick, single crutch, one arm) to walk outdoors
3	Usually uses bilateral support (stick, crutches, frame, two arms) to walk outdoors
4	Usually uses wheelchair to travel outdoors, but able to stand and walk a few steps with help
5	Restricted to wheelchair, unable to stand and walk a few steps with help

Refractory Myasthenia Gravis Disease- unchanged or worse disease after corticosteroids and at least 2 other immunosuppressants, used in adequate doses for an adequate duration, with persistent symptoms or side effects that limit functioning, as defined by patient and physician

POLICY

It is the policy of the Health Plan to maintain a prior authorization process that promotes appropriate utilization of specific drugs with potential for misuse or limited indications. This process involves a review using Food and Drug Administration (FDA) criteria to make a determination of Medical Necessity, as defined in CRM.015-Medical Necessity, and approval by the Pharmacy & Therapeutics Committee of the criteria for prior authorization, as described in RX.003-Prior Authorization Process.

The drugs, intravenous immune globulin (IVIG) and subcutaneous immune globulin (SCIG), are subject to the prior authorization process.

PROCEDURE

IVIG and SCIG are used to increase circulating levels of gamma globulin in certain immunoglobulin deficiency states and in treatment of a limited number of specified diseases.

Must meet all of the criteria listed below:

FDA Approved Indications

1. For Primary Immunodeficiency

- Syndromes may include:
 - Common Variable Immunodeficiency (Hypogammaglobulinemia)
 - Congenital Agammaglobulinemia
 - Bruton's or X-linked Agammaglobulinemia
 - Severe Combined Immunodeficiency (SCID)
 - X-linked Hyper-IgM Syndrome
 - Wiskott-Aldrich Syndrome
 - Hypergammaglobulinemia Types
- Must be prescribed by or in consultation with an immunologist or hematologist
- Must have deficient antibody production, as evidenced through a documented IgG level $\leq 500\text{mg/dL}$
 - Requests with IgG levels $>500\text{mg/dL}$ require chart documentation that provides clinical rationale for the use of IVIG or SCIG.
- Must have history of at least 1 bacterial infection directly attributable to this deficiency
- Approve for 1 year initially



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 3 of 17

- Reauthorizations are granted for 1-year intervals based upon documentation from the prescriber of an updated IgG level and that the member's condition has improved as a result of treatment.

2. For Idiopathic or Immune Thrombocytopenic Purpura (ITP)

(Platelet counts expressed per mm³)

- Must be prescribed by a hematologist or oncologist
- For children with ITP:
 - Must have ONE of the following:
 - Platelet count <20,000 and significant mucous membrane bleeding
 - Platelet count <10,000 and minor purpura
 - Platelet count <20,000 and inaccessibility or noncompliance is a concern
 - Any surgery, dental extractions, or other procedures likely to cause blood loss are needed
- For adults with ITP:
 - Must have ONE of the following:
 - Platelet count <30,000 and documented previous inadequate response or intolerance to corticosteroids
 - Surgical procedures likely to cause blood loss are needed based upon the following platelet counts: dentistry ≤10,000, except teeth extractions or regional dental block ≤30,000
 - Minor surgery ≤50,000
 - Major surgery ≤80,000
- For pregnant women with ITP
 - Must be pregnant and have ONE of the following:
 - Platelet count is <100,000
 - History of splenectomy
 - Previously delivered infants with autoimmune thrombocytopenia
- Approve for 1 month
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing the previous response and clinical rationale for re-treatment.

3. For Kawasaki Disease

- Must be receiving aspirin concomitantly
- Must be requesting treatment within the first 10 days of illness, or if >10 days, must have persistent fever (without other explanation), aneurysms, and ongoing systemic inflammation
- Approve for 1 dose
- May approve second dose in patients who fail to respond to initial therapy
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing the previous response and clinical rationale for re-treatment.

4. For Chronic B-cell Lymphocytic Leukemia

- Must be prescribed by a hematologist, oncologist, or infectious disease specialist
- Must have Hypogammaglobulinemia (IgG <500mg/dl)
- Must have previous history of serious bacterial infection (requiring antibiotics)



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 4 of 17

- Approve for 1 year
- Reauthorizations are granted at 1-year intervals based upon documentation from the prescriber indicating that the member's condition has improved as a result of treatment.

5. For HIV (Human Immunodeficiency Virus) in pediatric patients

- Must be prescribed by an immunologist or infectious disease specialist
- Must be <13 years old
- Must have CD4 count $\geq 200/\text{mm}^3$
- Must have ONE of the following
 - Recurrent (2 or more) serious bacterial infections such as bacteremia, meningitis, or pneumonia during a 1-year period despite administration of highly active antiretroviral therapy (HAART) and prophylactic sulfamethoxazole/trimethoprim (TMP-SMZ)or other antimicrobials
 - Hypogammaglobulinemia with an IgG <400mg/dL
 - Absence of detectable antibodies to common antigens, (measles, pneumococcal, and/or haemophilus influenzae Type B)
 - Bronchiectasis not optimally responsive to antibiotics and pulmonary therapy
 - A need for passive immunization for measles if Intramuscular Immune Globulin (IMIG) is contraindicated. IM injection contraindicated with severe thrombocytopenia or any coagulation disorder
- Approve for 1 year
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response and clinical rationale for re-treatment.

6. For Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)

- Must be prescribed by a neurologist
- Must have a diagnosis of CIDP
- Must provide documentation of electrodiagnostic testing (an EMG report)
- Must have significant disability in upper and lower limb function as defined as having arm disability of INCAT grade 2 or higher OR leg disability of INCAT grade 1 or higher
- Approve for 3 months
- Reauthorizations are granted at 1-year intervals based upon documentation from the prescriber indicating the member's condition has improved as a result of treatment as evidenced by improvement or stability in INCAT disability scores.

7. For Multifocal Motor Neuropathy

- Must be prescribed by a neurologist
- Must provide documentation of electrodiagnostic testing (an EMG report)
- Must be used in patients with anti GM1 antibodies and conduction block
- Approve for 2 months
- Reauthorizations are granted for 1-year intervals based upon documentation from the prescriber indicating the member's condition has improved as a result of treatment



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 5 of 17

Off-label Uses

1. For Guillain-Barre Syndrome

- Must have been diagnosed within 4 weeks of onset of neuropathic symptoms
- Must be non-ambulating independently
- Approve for 1 month
- May approve 1 additional month
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response to treatment and clinical rationale for re-treatment.

2. For Dermatomyositis and Polymyositis (including juvenile)

- Must have dermatomyositis and polymyositis confirmed by biopsy
- Must have tried and failed or have a contraindication to both of the following:
 - Corticosteroids for 3 months
 - Concomitant adjuvant therapy (azathioprine, methotrexate, cyclosporine)
- Approve for 2 months for either diagnosis
- Reauthorizations are granted upon documentation from the prescriber indicating the member's condition has improved as a result of treatment for:
 - Dermatomyositis: 1 year
 - Polymyositis: 2 months

3. For Systemic Lupus Erythematosus (SLE)

- Must have severe active SLE
- Must have tried and failed or have contraindications to ALL of the following:
 - Corticosteroids
 - Antimalarials
 - 1 additional immunosuppressant (azathioprine, cyclophosphamide, cyclosporine, methotrexate)
- Approve for 3 months
- Reauthorizations are granted for 1-year intervals based upon documentation from the prescriber indicating the member's condition has improved as a result of treatment.

4. For Multiple Sclerosis (MS)

- Must be prescribed by a neurologist
- For acute exacerbations of MS:
 - Must have a trial and failure or have contraindications to corticosteroids or plasma exchange
 - Approve for 1 month
 - Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response to treatment and clinical rationale for re-treatment if IVIG did not provide a sufficient response.
- For chronic maintenance treatment of MS:
 - Must have relapsing, remitting type of MS



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 6 of 17

- Must have a trial and failure (duration of at least 3 months) or have contraindications to ALL of the following:
 - At least one interferon [interferon beta-1a (Rebif®) or interferon beta-1b (Betaseron®)]
 - Glatiramer (Copaxone®)
 - Fingolimod (Gilenya®)
- No previous trials are required if:
 - Member is pregnant
 - Member is immunosuppressed or is having recurrent infections
- Approve for 6 months
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response to treatment and clinical rationale for re-treatment.

5. For Autoimmune Mucocutaneous Blistering Disease (AMBD)

- Must have biopsy-proven pemphigus vulgaris, pemphigus foliaceus, bullous pemphigoid, mucous membrane pemphoid (a.k.a., cictrical pemphigoid), and epidermolysis bullosa acquisita
- Must have a trial and failure or have contraindications to corticosteroids or immunosuppressive agents
- In rapidly progressive, extensive, or debilitating cases (i.e. Stevens Johnson Syndrome), IVIG may be approved along with corticosteroids or immunosuppressive agents
- Approve for 4 months
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response to treatment and clinical rationale for re-treatment.

6. For Myasthenia Gravis Syndrome

- Must have a diagnosis of Myasthenia Gravis
- Must be prescribed by a neurologist
- For acute use:
 - Chart documentation of acute exacerbation and impaired function is required (e.g. respiratory insufficiency, inability to swallow)
 - Approve for 1 month
 - Reauthorizations are granted on a case by case basis with chart documentation describing previous response to treatment and clinical rationale for re-treatment
- For temporary use as a bridge to immunotherapy:
 - Must have a history of myasthenia gravis exacerbation
 - Must be recently started (within 3 months) on immunosuppressant therapy (e.g. azathioprine, mycophenolate, cyclosporine, or tacrolimus)
 - Chart documentation of use as bridge therapy is required
 - Approve for 6 months
 - Reauthorizations are granted on a case by case basis with chart documentation describing previous response to treatment and clinical rationale for re-treatment
- For stabilization prior to surgery:
 - Must have a history of myasthenia gravis with current or previous difficulty with swallowing, speech, or respiratory involvement (e.g. shortness of breath or reduce force



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 7 of 17

vital capacity on pre-op pulmonary function test). Chart documentation of symptoms is required.

- IVIG infusion must be scheduled within 14 days of anticipated surgery date
- Approve for 1 month
- Reauthorizations are granted on a case by case basis with chart documentation describing previous response to treatment and clinical rationale for re-treatment
- For chronic use in refractory disease:
 - Must have an adequate trial with inadequate response, significant side effects/toxicity, or have a contraindication to both of the following:
 - Cholinesterase inhibitors- pyridostigmine or neostigmine
 - Corticosteroids
 - Must have an adequate trial of at least 3 months each with inadequate response, significant side effects/toxicity, or have a contraindication to TWO of the following:
 - Azathioprine
 - Mycophenolate mofetil
 - Cyclosporine
 - Tacrolimus
 - Methotrexate
 - Approve for 6 months
 - Reauthorizations for patients with refractory disease are granted for 1 year intervals on a case by case basis and require chart documentation describing previous response to treatment, including improvement in symptoms that limit daily function

7. For Parvovirus B19 Infection

- Must have documentation (e.g. Polymerase Chain Reaction test result) confirming presence of HPV-B19 infection
- Must have severe anemia defined as hemoglobin level <8ng/dL
- Must have low reticulocyte count defined as <8x10⁹/L
- Must have history of immunodeficiency due to suppressive medications or HIV
- Approve for 1 month
- Additional authorizations for treatment made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response to treatment and clinical rationale for re-treatment.

8. For Renal and/or Pancreatic Transplant Desensitization in Combination with Rituxan

- Must be prescribed by a transplant specialist
- Must be age 18 or older
- Must be awaiting kidney and/or pancreas transplant requiring desensitization as defined by the following criteria:
 - For deceased donor transplants:
 - Panel reactive antibody (PRA) level >30% **OR**
 - PRA <30% with previous kidney and/or pancreas transplant
 - For living donor transplants:
 - Positive crossmatch **OR**
 - Positive donor-specific antibody using Luminex® assay
- Approve for 1 course of treatment (2 doses)



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 8 of 17

- Additional authorizations for treatment are subject to the above criteria and are not granted until 6 months have passed since the initial treatment.

9. For Renal Transplant Desensitization

- Must be prescribed by a transplant specialist
- Must be awaiting kidney transplant (either from a living or deceased donor) and requiring desensitization
- Approve for 4 months
- Additional authorizations for treatment are subject to the above criteria and are not granted until 12 months have passed since the initial treatment.

10. For Renal Post-Transplant Rejection

- Must have received a renal transplant from a living donor with post-transplant rejection
- Approve for 1 month
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing previous response to treatment and clinical rationale for re-treatment.

11. For Allogenic or Hematopoietic Stem Cell Transplantation (HSCT) (or Bone Marrow Transplant)

- Must have severe hypogammaglobulinemia (IgG <400 mg/dL)
- Must have history of recurrent infections
- Approve for 6 months
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing the previous response to treatment and clinical rationale for re-treatment.

12. For Autoimmune Hemolytic Anemia

- Must have warm-type diagnosis
- Must have a trial and failure or have contraindications to corticosteroids
- Approve for 1 month
- Additional authorizations for treatment are made on a case-by-case basis, are subject to the above criteria, and require chart documentation describing the previous response to treatment and clinical rationale for re-treatment.

13. For Stiff-Person Syndrome

- Must have a diagnosis of Stiff-Person Syndrome confirmed by electromyography (EMG) or elevated levels of glutamic acid decarboxylase (GAD)
- Must be prescribed by a neurologist
- Must have an adequate trial with inadequate responses, significant side effects/toxicity, or have contraindications to THREE of the following:
 - Corticosteroids
 - Antiepileptics
 - Benzodiazepines
 - Muscle relaxants



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: RX.PA.068.E

REVISION DATE: 12/17

PAGE NUMBER: 9 of 17

- Gabapentin
- Approve for 4 months
- Reauthorization for an additional 2 months of treatment may be made on a case-by-case basis, is subject to the above criteria, and require chart documentation describing the previous response to treatment and clinical rationale for re-treatment. Continued use beyond 6 months of therapy is not authorized.

Limitations:

Length of Authorization (if above criteria met)	
Initial Authorization	Case-by-Case bases (see criteria above)
Reauthorization	Same as initial

If the established criteria are not met, the request is referred to a Medical Director for review.

REFERENCES

1. Immune globulin intravenous (human) In: Drug information for the health care professional. USPDI— Volume I. 25rd ed. Greenwood Village, CO: 2005.; Thomson Reuters Micromedex; 2012.
2. Knezevic-Maramica I, Kruskall MS. Intravenous immune globulins: an update for clinicians. *Transfusion*. 2003;43:1460-1480.
3. Carimune NF [package insert]. Kankakee, IL: ZLB Behring LLC (manufactured by ZLB Behring AG, Switzerland); January 2005.
4. Flebogamma 5% solution [package insert]. Los Angeles, CA: Grifols USA, Inc (manufactured by Instituto Grifols, SA, Barcelona, Spain); January 2004.
5. Gammagard Liquid [package insert]. Westlake Village, CA: Baxter Healthcare Corporation; July 2012.
6. Gamunex-C [package insert]. Elkhart, IN: Bayer Corporation; October 2010.
7. Octagam [package insert]. Herndon, VA: Octapharma USA, Inc (manufactured by Octapharma Pharmazeutika, Vienna, Austria); March 2007. Gammagard® Liquid 10% [package insert]. Westlake Village, CA: Baxter Healthcare Corporation; December 2011. Buckley RH, Schiff RI. The use of intravenous immune globulin in immunodeficiency diseases. *NEJM*. 1991;325:110-117.
8. Neunert et al. ASH 2011 Evidence Based Practice Guideline for Idiopathic thrombocytopenia purpura. *Blood* April 2011. 4191-4204.
9. Cines DB, Blanchette VS. Immune thrombocytopenic purpura. *NEJM*. 2002 Mar 28;346:995-1008.
10. British Committee for Standards in Haematology General Haematology Task Force. Guidelines for the investigation and management of idiopathic thrombocytopenic purpura in adults, children and in pregnancy. *Br J Haematol*. 2003;120:574-596.
11. Vesely SK, Perdue JJ, Rizvi MA, et al. Management of adult patients with persistent idiopathic thrombocytopenic purpura following splenectomy: a systematic review. *Ann Intern Med*. 2004;140:112-120.
12. Buchanan GR, de Alarcon PA, Feig SA, et al. Acute idiopathic thrombocytopenic purpura – management in childhood. *Blood*. 1997;89:1464-1465.
13. Immune globulin (Drugdex® Drug Evaluation). Micromedex® Healthcare Series: Thomson Micromedex, Greenwood Village, Colorado. Accessed: January 2012
14. Newburger JW, Takahashi M, Gerber MA, et al; Committee on Rheumatic Fever, Endocarditis and Kawasaki Disease; Council on Cardiovascular Disease in the Young; American Heart Association;



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 10 of 17

- American Academy of Pediatrics. Diagnosis, treatment, and long-term management of Kawasaki disease: a statement for health professionals from the Committee on Rheumatic Fever, Endocarditis and Kawasaki Disease, Council on Cardiovascular Disease in the Young, American Heart Association. *Circulation*. 2004;110:2747-2771.
15. Ratko TA, Burnett DA, Foulke GE, et al. Recommendations for off-label use of intravenously administered immunoglobulin preparations. *JAMA*. 1995;273:1865-1870.
 16. Ballou M. Intravenous immunoglobulins: clinical experience and viral safety. *J Am Pharm Assoc*. 2002;42:449-459.
 17. British Columbia Blood Coordinating Office. *IVIG utilization management handbook*. 1st Ed. British Columbia, Canada: Provincial Blood Coordinating Office; April 2002. <http://www.bloodlink.bc.ca/ivig.html> Accessed 03/14/2005.
 18. [No authors listed]. Intravenous immunoglobulin for the prevention of infection in chronic lymphocytic leukemia. A randomized, controlled clinical trial. Cooperative Group for the Study of Immunoglobulin in Chronic Lymphocytic Leukemia. *N Engl J Med*. 1988;319:902-907.
 19. Gamm H, Huber C, Chapel H, et al. Intravenous immune globulin in chronic lymphocytic leukaemia. *Clin Exp Immunol*. 1994;97 Suppl 1:17-20.
 20. Centers for Disease Control and Prevention; Infectious Disease Society of America; American Society of Blood and Marrow Transplantation. Guidelines for preventing opportunistic infections among hematopoietic stem cell transplant recipients. *MMWR Recomm Rep*. 2000 Oct;49(RR-10):1-125, CE1-7.
 21. Sullivan KM, Storek J, Kopecky KJ, et al. A controlled trial of long-term administration of intravenous immunoglobulin to prevent late infection and chronic graft-vs.-host disease after marrow transplantation: clinical outcome and effect on subsequent immune recovery. *Biol Blood Marrow Transplant*. 1996;2:44-53.
 22. Mouthon L, Lortholary O. Intravenous immunoglobulins in infectious diseases: where do we stand? *Clin Microbiol Infect*. 2003;9:333-338.
 23. Centers for Disease Control and Prevention. Guidelines for preventing opportunistic infections among HIV-infected persons – 2002 recommendations of the U.S. Public Health Service and the Infectious Diseases Society of America. *MMWR*. 2002;51(No. RR-8):1-52.
 24. American Academy of Pediatrics. **Human Immunodeficiency Virus Infection**. In: Pickering LK, ed. *Red Book: 2003 Report of the Committee on Infectious Diseases*. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2003:360-382.
 25. [No authors listed]. Antiretroviral therapy and medical management of pediatric HIV infection and 1997 USPHS/IDSA report on the prevention of opportunistic infections in persons infected with human immunodeficiency virus. *Pediatrics*. 1998;102(4 Pt 2):999-1085.
 26. Mofenson LM, Oleske J, Serchuck L, et al; CDC; National Institutes of Health; Infectious Diseases Society of America. Treating opportunistic infections among HIV-exposed and infected children: recommendations from CDC, the National Institutes of Health, and the Infectious Diseases Society of America. *MMWR Recomm Rep*. 2004 Dec 3;53(RR-14):1-92.
 27. Spector SA, Gelber RD, McGrath N, et al. A controlled trial of intravenous immune globulin for the prevention of serious bacterial infections in children receiving zidovudine for advanced human immunodeficiency virus infection. Pediatric AIDS Clinical Trials Group. *N Engl J Med*. 1994;331:1181-1187.
 28. Ahmed AR, Dahl MV. Consensus statement on the use of intravenous immunoglobulin therapy in the treatment of autoimmune mucocutaneous blistering diseases. *Arch Dermatol*. 2003;139:1051-1059.
 29. Ruetter A, Luger TA. Efficacy and safety of intravenous immunoglobulin for immune-mediated skin disease. Current view. *Am J Clin Dermatol*. 2004;5:153-160.



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: RX.PA.068.E

REVISION DATE: 12/17

PAGE NUMBER: 11 of 17

30. Dalakas MC. Intravenous immunoglobulin in autoimmune neuromuscular diseases. *JAMA*. 2004;291:2367-2375.
31. Hadden RD, Hughes RA. Management of inflammatory neuropathies. *J Neurol Neurosurg Psychiatry*. 2003;74 Suppl 2:ii9-ii14.
32. Danieli MG, Cappelli M, Malcangi G, et al. Long term effectiveness of intravenous immunoglobulin in Churg-Strauss syndrome. *Ann Rheum Dis*. 2004;63:1649-1654.
33. Tsurikisawa N, Taniguchi M, Saito H, et al. Treatment of Churg-Strauss syndrome with high-dose intravenous immunoglobulin. *Ann Allergy Asthma Immunol*. 2004;92:80-87.
34. Ljungman P, Reusser P, de la Camara R, et al; for the Infectious Diseases Working Party of the European Group for Blood and Marrow Transplantation. Management of CMV infections: recommendations from the infectious diseases working party of the EBMT. *Bone Marrow Transplant*. 2004;33:1075-1081.
35. Sokos DR, Berger M, Lazarus HM. Intravenous immunoglobulin: appropriate indications and uses in hematopoietic stem cell transplantation. *Biol Blood Marrow Transplant*. 2002;8:117-130.
36. John R, Lietz K, Burke E, et al. Intravenous immunoglobulin reduces anti-HLA alloreactivity and shortens waiting time to cardiac transplantation in highly sensitized left ventricular assist device recipients. *Circulation*. 1999;100[suppl II]:II-229-II235.
37. Itescu S, Burke E, Lietz K, et al. Intravenous pulse administration of cyclophosphamide is an effective and safe treatment for sensitized cardiac allograft recipients. *Circulation*. 2002;105:1214-1219.
38. Jordan SC, Tyan D, Stablein D, et al. Evaluation of intravenous immunoglobulin as an agent to lower allosensitization and improve transplantation in highly sensitized adult patients with end-stage renal disease: report of the NIH IG02 trial. *J Am Soc Nephrol*. 2004;15:3256-3262.
39. Mackay MT, Weiss SK, Adams-Webber T, et al; American Academy of Neurology; Child Neurology Society. Practice parameter: medical treatment of infantile spasms: report of the American Academy of Neurology and the Child Neurology Society. *Neurology*. 2004;62:1668-1681.
40. Dykes AC, Walker ID, Lowe GD, et al. Combined prednisolone and intravenous immunoglobulin treatment for acquired factor VIII inhibitors: a 2-year review. *Haemophilia*. 2001;7:160-163.
41. Collins PW. Management of acquired haemophilia A – more questions than answers. *Blood Coagul Fibrinolysis*. 2003;14 Suppl 1:S23-27.
42. Rubinger M, Rivard GE, Teitel J, et al, the Inhibitor Subcommittee of the Association of Hemophilia Clinic Directors of Canada (AHCDC). Suggestions for the management of hemophiliacs and non-hemophiliacs with factor VIII inhibitors. 3rd ed. May 14, 1999. <http://www.ahcdc.ca/Suggestions.htm> Accessed 3/10/2005.
43. Baschieri L, Antonelli A, Nardi S, et al. Intravenous immunoglobulin versus corticosteroid in treatment of Graves' ophthalmopathy. *Thyroid*. 1997;7:579-585.
44. Kahaly G, Pitz S, Muller-Forell W, et al. Randomized trial of intravenous immunoglobulins versus prednisolone in Graves' ophthalmopathy. *Clin Exp Immunol*. 1996;106:197-202.
45. Hughes RA, Wijdicks EF, Barohn R, et al; Quality Standards Subcommittee of the American Academy of Neurology. Practice parameter: immunotherapy for Guillain-Barre syndrome: report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology*. 2003;61:736-740.
46. Jahnke L, Applebaum S, Sherman LA, et al. An evaluation of intravenous immunoglobulin in the treatment of human immunodeficiency virus-associated thrombocytopenia. *Transfusion*. 1994;34:759-764.



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: RX.PA.068.E

REVISION DATE: 12/17

PAGE NUMBER: 12 of 17

47. Majluf-Cruz A, Luna-Castanos G, Huitron S, et al. Usefulness of a low-dose intravenous immunoglobulin regimen for the treatment of thrombocytopenia associated with AIDS. *Am J Hematol.* 1998;59:127-132.
48. WinRho SDF® [package insert]. Westlake Village, CA (manufactured by Cangene Corporation, Winnipeg, Canada): October 2004.
49. Comi G, Roveri L, Swan A, et al; Inflammatory Neuropathy Cause and Treatment Group. A randomised controlled trial of intravenous immunoglobulin in IgM paraprotein associated demyelinating neuropathy. *J Neurol.* 2002;249:1370-1377.
50. Cherin P, Pelletier S, Teixeira A, et al. Intravenous immunoglobulin for dysphagia of inclusion body myositis. *Neurology.* 2002;58:326.
51. Jordan SC, Vo AA, Nast CC, et al. Use of high-dose human intravenous immunoglobulin therapy in sensitized patients awaiting transplantation: the Cedars-Sinai experience. *Clin Transpl.* 2003;:193-198.
52. Jordan S, Cunningham-Rundles C, McEwan R. Utility of intravenous immune globulin in kidney transplantation: efficacy, safety, and cost implications. *Am J Transplant.* 2003;3:653-664.
53. Maddison P, Newsom-Davis J. Treatment for Lambert-Eaton myasthenic syndrome. *Cochrane Database Syst Rev.* 2003;(2):CD003279.
54. 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;61:1515-1520.
55. Gray O, McDonnell GV, Forbes RB. Intravenous immunoglobulins for multiple sclerosis. *Cochrane Database Syst Rev.* 2003;(4):CD002936.
56. Goodin DS, Frohman EM, Garmany GP Jr, et al; Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology and the MS Council for Clinical Practice Guidelines. Disease modifying therapies in multiple sclerosis: report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology and the MS Council for Clinical Practice Guidelines. *Neurology.* 2002;58:169-178.
57. Achiron A, Kishner I, Dolev M, et al. Effect of intravenous immunoglobulin treatment on pregnancy and postpartum-related relapses in multiple sclerosis. *J Neurol.* 2004;251:1133-1137.
58. Bux J, Behrens G, Jaeger G, et al. Diagnosis and clinical course of autoimmune neutropenia in infancy: analysis of 240 cases. *Blood.* 1998;91:181-186.
59. Herrod HG. Management of the patient with IgG subclass deficiency and/or selective antibody deficiency. *Ann Allergy.* 1993;70:3-8.
60. Lawton AR. IgG subclass deficiency and the day-care generation. *Pediatr Infect Dis J.* 1999;18:462-466.
61. Buckley RH. Immunoglobulin G subclass deficiency: fact or fancy? *Curr Allergy Asthma Reports.* 2002;2:356-360.
62. Silk HJ, Ambrosino D, Geha RS. Effect of intravenous gammaglobulin therapy in IgG2 deficient and IgG2 sufficient children with recurrent infections and poor response to immunization with Hemophilus influenzae type b capsular polysaccharide antigen. *Ann Allergy.* 1990;64:21-25.
63. Bjorkander J, Bengtsson U, Oxelius VA, et al. Symptoms in patients with lowered levels of IgG subclasses, with or without IgA deficiency, and effects of immunoglobulin prophylaxis. *Monogr Allergy.* 1986;20:157-163.
64. Dalakas MC, Fujii M, Li M, et al. High-dose intravenous immune globulin for stiff-person syndrome. *N Engl J Med.* 2001;345:1870-1876.
65. Ioannou Y, Isenberg DA. Current concepts for the management of systemic lupus erythematosus in adults: a therapeutic challenge. *Postgrad Med J.* 2002;78:599-606.



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: RX.PA.068.E

REVISION DATE: 12/17

PAGE NUMBER: 13 of 17

66. O'Donnell BF, Barr RM, Kobza A, et al. Intravenous immunoglobulin in autoimmune chronic urticaria. *Br J Dermatol*. 1998;138:101-106.
67. Asero R. Are IVIG for chronic unremitting urticaria effective? *Allergy*. 2000;55:1099-1101.
68. Dawn G, Urcelay M, Ah-Weng A, et al. Effect of high-dose intravenous immunoglobulin in delayed pressure urticaria. *Br J Dermatol*. 2003;149:836-840.
69. Joint Tasks Force on Practice Parameters. The diagnosis and management of urticaria: a practice parameter part I: acute urticaria/angioedema part II: chronic urticaria/angioedema. *Ann Allergy Asthma Immunol* 2000;85(6 Pt 2):521-544.
70. Becker MD, Rosenbaum JT. Current and future trends in the use of immunosuppressive agents in patients with uveitis. *Curr Opin Ophthalmol*. 2000;11:472-477.
71. LeHoang P, Cassoux N, George F, et al. Intravenous immunoglobulin (IVIg) for the treatment of birdshot retinochoroidopathy. *Ocul Immunol Inflamm*. 2000;8:49-57.
72. Jayne DR, Chapel H, Adu D, et al. Intravenous immunoglobulin for ANCA-associated systemic vasculitis with persistent disease activity. *QJM*. 2000;93:433-439.
73. Relkin N, Szabo, Adamiak B, et al. Intravenous immunoglobulin (IVIG) treatment causes dose-dependent alterations in β -amyloid ($A\beta$) levels and anti- $A\beta$ antibody titers in plasma and cerebrospinal fluid (CSF) of Alzheimer's disease (AD) patients [abstract]. Presented at: American Academy of Neurology 57th Annual Meeting; April 12, 2005: Miami Beach, FL.
74. Dodel RC, Du Y, Depboylu C, et al. Intravenous immunoglobulins containing antibodies against beta-amyloid for the treatment of Alzheimer's disease. *J Neurol Neurosurg Psychiatry*. 2004;75:1472-1474.
75. Hack CE, Scheltens P. Intravenous immunoglobulins: a treatment for Alzheimer's disease? *J Neurol Neurosurg Psychiatry*. 2004;75:1374-1375.
76. Niven AS, Argyros G. Alternate treatments in asthma. *Chest*. 2003;123:1254-1265.
77. Jolles S, Sewell C, Webster D, et al. Adjunctive high-dose intravenous immunoglobulin treatment for resistant atopic dermatitis: efficacy and effects on intracellular cytokine levels and CD4 counts. *Acta Derm Venereol*. 2003;83:433-437.
78. Paul C, Lahfa M, Bachelez H, et al. A randomized controlled evaluator-blinded trial of intravenous immunoglobulin in adults with severe atopic dermatitis. *Br J Dermatol*. 2002;147:518-522.
79. Jolles S. A review of high-dose intravenous immunoglobulin treatment for atopic dermatitis. *Clin Exp Dermatol*. 2002;27:3-7.
80. Jolles S, Hughes J. Importance of trial design in studies using high-dose intravenous immunoglobulin. *Br J Dermatol*. 2003;148:1284-5; author reply 1285-6.
81. Wakim M, Alazard M, Yajima A, et al. High dose intravenous immunoglobulin in atopic dermatitis and hyper-IgE syndrome. *Ann Allergy Asthma Immunol*. 1998;81:153-158.
82. Noh G, Lee KY. Intravenous immune globulin (i.v.IG) therapy in steroid-resistant atopic dermatitis. *J Korean Med Sci*. 1999;14:63-68.
83. Hanifin JM, Cooper KD, Ho V, et al. Guidelines of care for atopic dermatitis. *J Am Acad Dermatol*. 2004;50:391-404.
84. Wolff SN, Fay JW, Herzig RH, et al. High-dose weekly intravenous immunoglobulin to prevent infections in patients undergoing autologous bone marrow transplantation or severe myelosuppressive therapy. A study of the American Bone Marrow Transplant Group. *Ann Intern Med*. 1993;118:937-942.
85. Seider N, Beiran I, Scharf J, et al. Intravenous immunoglobulin therapy for resistant ocular Behcet's disease. *Br J Ophthalmol*. 2001;85:1287-1288.
86. Cordonnier C, Chevret S, Legrand M, et al; GREFIG Study Group. Should immunoglobulin therapy be used in allogeneic stem-cell transplantation? A randomized, double-blind, dose effect, placebo-controlled, multicenter trial. *Ann Intern Med*. 2003;139:8-18.



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 14 of 17

87. Gottstein R, Cooke RW. Systematic review of intravenous immunoglobulin in haemolytic disease of the newborn. *Arch Dis Child Fetal Neonatal Ed.* 2003;88:F6-10.
88. Hommes OR, Sorensen PS, Fazekas F, et al. Intravenous immunoglobulin in secondary progressive multiple sclerosis: randomised placebo-controlled trial. *Lancet.* 2004;364:1149-1156.
89. Ohlsson A, Lacy JB. Intravenous immunoglobulin for suspected or subsequently proven infection in neonates. *Cochrane Database Syst Rev.* 2004:CD001239.
90. Ohlsson A, Lacy JB. Intravenous immunoglobulin for preventing infection in preterm and/or low-birth-weight infants. *Cochrane Database Syst Rev.* 2004;(1):CD000361.
91. Fanaroff AA, Korones SB, Wright LL, et al. A controlled trial of intravenous immune globulin to reduce nosocomial infections in very-low-birth-weight infants. National Institute of Child Health and Human Development Neonatal Research Network. *N Engl J Med.* 1994;330:1107-1113.
92. American College of Obstetricians and Gynecologists (ACOG). ACOG Practice Bulletin. Management of recurrent early pregnancy loss. Washington, DC: ACOG; 2001 Feb.
93. Branch DW, Peaceman AM, Druzin M, et al. A multicenter, placebo-controlled pilot study of intravenous immune globulin treatment of antiphospholipid syndrome during pregnancy. The Pregnancy Loss Study Group. *Am J Obstet Gynecol.* 2000;182(1 Pt 1):122-127.
94. Practice Committee of the American Society for Reproductive Medicine. Intravenous immunoglobulin (IVIG) and recurrent spontaneous pregnancy loss. *Fertil Steril.* 2004;82 Suppl 1:S199-200.
95. Levy Y, Amital H, Langevitz P, et al. Intravenous immunoglobulin modulates cutaneous involvement and reduces skin fibrosis in systemic sclerosis: an open-label study. *Arthritis Rheum.* 2004;50:1005-1007.
96. White B, Bauer EA, Goldsmith LA, et al. Guidelines for clinical trials in systemic sclerosis (scleroderma). I. Disease-modifying interventions. The American College of Rheumatology Committee on Design and Outcomes in Clinical Trials in Systemic Sclerosis. *Arthritis Rheum.* 1995;38:351-360.
97. Pereyra F, Rubin RH. Prevention and treatment of cytomegalovirus infection in solid organ transplant recipients. *Curr Opin Infect Dis.* 2004;17:357-361.
98. Preiksaitis JK, Brennan DC, Fishman J, et al. Canadian Society of Transplantation consensus workshop on cytomegalovirus management in solid organ transplantation final report. *Am J Transplant.* 2005;5:218-227.
99. Hizentra™ [package insert]. Bern, Switzerland: CSL Behring; March 2010.
100. Gammalex® [package insert]. Elstree Hertfordshire, United Kingdom: Bio Products Laboratory; 2009.
101. Shehata N, et al. The use of immunoglobulin therapy for patients with Primary Immune Deficiency: an evidence-based practice guideline. *Transfusion Medicine Reviews* 2010. 24(1): S28-S50. Yellen ES, et al. Performance of 2004 American Heart Association recommendations for treatment of Kawasaki disease. *Pediatrics* 2010. 125(2):e234-e241.
102. Mofenson L, et al. Guidelines for the Prevention and Treatment of Opportunistic Infections Among HIV-Exposed and HIV-Infected Children: Recommendations from CDC, the National Institutes of Health, the HIV Medicine Association of the Infectious Diseases Society of America, the Pediatric Infectious Diseases Society, and the American Academy of Pediatrics. *MMWR Recomm Rep.* 2009;10;58(RR-4):1-207.
103. Antoine JC, the French CIDP Study Group. Recommendations on diagnostic strategies for CIDP. *Journal of Neurology, Neurosurgery, Psychiatry* 2008. 79: 118.



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 15 of 17

104. Van Den Bergh PYK, et al. European Federation of Neurological Societies/PNS Guidelines on management of chronic inflammatory demyelinating polyradiculoneuropathy - first revision. *European Journal of Neurology* 2010. 17: 356-363.
105. Bromberg MB. Review of the Evolution of Electrodiagnostic Criteria for Chronic Inflammatory Demyelinating Polyradiculoneuropathy. *Issues & Opinions in Muscle & Nerve*; June 2011: 780-792.
106. Hughes RA, et al. Practice parameter: immunotherapy for Guillain-Barre syndrome: report of the Quality Standards Committee of the American Academy of Neurology. August 2, 2008.
107. Winer JB. When the Guillain Barre patient fails to respond to treatment. *Practice Neurology* 2009. 9:227-230.
108. Marie I, Mouthon L. Therapy of Polymyositis and dermatomyositis. *Autoimmunity Reviews* 2011. 11: 6-13.
109. Hak AE, et al. Dermatomyositis and polymyositis: new treatment targets on the horizon. *Journal of Medicine* 2011. 69(10): 415-416.
110. Aggarwal R, Oddis CN. Therapeutic Approaches in myositis. *Current Rheumatology Rep* 2011. 13: 182-191.
111. Berger JR. Functional improvement and symptom management in multiple sclerosis: clinical efficacy of current therapies. *American Journal of Managed Care* 2011. 17: S146-153.
112. Elovaara I, et al. Intravenous Immunoglobulins are a therapeutic option in the treatment of multiple sclerosis relapse. *Clinical Neuropharmacology* 2011. 34(2):84-88.
113. Rio J, et al. Multiple Sclerosis: current treatment algorithms. *Current Opinion in Neurology* 2011. 24: 230-237.
114. Feasby T, et al. Guidelines for the use of IVIG for neurological conditions. *Transfus Med Rev* 2007. 21 (2 suppl 1): S57-107.
115. Gold R, et al. Drug Insight: the use of IVIG in neurology. *Nature Clinical Practice Neurology* 2007. 3:36-44.
116. McGhee SA, et al. Persistent parvovirus-associated chronic fatigue treated with high dose IVIG. *Pediatric Infectious Disease Journal* 2005. 24(3):272-274.
117. Baden LR, et al. NCCN: Prevention and Treatment of Cancer-Related Infections. Version 2.2011.
118. Tomblyn M, et al. Guidelines for Preventing Infectious Complications among Hematopoietic Cell Transplantation Recipients. *Biol Blood Marrow Transplant* 2009. 15:1143-1238.
119. Yildirim-Toruner C, Diamond B. Current and novel therapeutics in the treatment of systemic lupus erythematosus. *Clinical reviews in allergy and immunology* 2010. 303-312.
120. Bayry J et al. Intravenous immunoglobulin treatment in rheumatic disease. *Nature Reviews Rheumatology* 2011. 7: 351-352.
121. Petz LP. Treatment of autoimmune hemolytic anemia. *Current Opinion in Hematology*. 2001;8:411-416.
122. Skele GO, et al. Guidelines for the treatment of autoimmune neuromuscular transmission disorders. *Euro J of Neurology* 2006. 13: 691-699.
123. Fazekas et al. Randomised placebo-controlled trial of monthly intravenous immunoglobulin therapy in relapsing-remitting multiple sclerosis. *Lancet* 1997; 349:589-593.
124. Achiron et al. Intravenous immunoglobulin treatment in multiple sclerosis: effect on relapses. *Neurology* 1998; 50: 398-402.
125. Sorenson et al. Intravenous immunoglobulin G reduced MRI activity in relapsing multiple sclerosis. *Neurology* 1998 50: 1273-1281.
126. Achiron et al. Intravenous immunoglobulin treatment following the first demyelinating event suggestive of Multiple Sclerosis. *Arch Neurology* 2004; 61:1515-1520



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: *RX.PA.068.E*

REVISION DATE: 12/17

PAGE NUMBER: 16 of 17

127. Orange J, Hossny E, Weiler C, et al. Use of intravenous immunoglobulin in human disease: a review of evidence by members of the Primary Immunodeficiency Committee of the American Academy of Allergy, Asthma, and Immunology. *J Allergy Clin Immunol*. 2006;117(4):S525-S553.
128. Leong H, Stachnik J, Bonk ME, Matuszewski KA. Unlabeled uses of intravenous immune globulin. *Am J Health Syst Pharm*. 2008;65(19):1815-1824.
129. RhoGAM® and MICRhoGAM® [package insert]. Raritan, NJ; Ortho-Clinical Diagnostics, Inc.; 2007. Available at: <http://www.rhogam.com/Patient/News/Pages/default.aspx>.
130. Panglobulin® [package insert]. Berne, Switzerland; ZLB Bioplasma AG; 2000. Available at: http://www.ctint.org/inserts/Panglobulin_insert.pdf.
131. Polygam® [package insert]. Westlake Village, CA; Baxter Healthcare Corporation; 2002. Available at: http://www.ctint.org/inserts/PolygamSD_insert.pdf.
132. Rhophylac® [package insert]. Bern, Switzerland; CSL Behring AG; 2010. Available at: <http://labeling.cslbehring.com/PI/US/Rhophylac/EN/Rhophylac-Prescribing-Information.pdf>.
133. Thymoglobulin® [package insert]. Cambridge, MA; Genzyme Corporation; 2008. Available at: http://www.thymoglobulin.com/home/thymo_pdf_pi.pdf.
134. Winrho® [package insert]. Winnipeg, Manitoba; Cangene Corporation; 2010. Available at: <http://www.winrho.com/pi.pdf>.
135. Patwa HS, Chaudry V, Katzberg H, et al. 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;78:1009-1015
136. Leger J, Chassandre B, Musset L, et al. Intravenous immunoglobulin therapy in multifocal motor neuropathy: a double-blind, placebo-controlled study. *Brain* 2001;124:145-153
137. Federico P, Zochodne DW, Hahn AF, et al. Multifocal motor neuropathy improved by IVIg: randomized, double-blind, placebo-controlled study. *Neurology* 2000;55:1256-1262
138. Hughes R, Bensa S, Willison H, et al. Randomized controlled trial of intravenous immunoglobulin versus oral prednisolone in chronic inflammatory demyelinating polyradiculoneuropathy. *Ann Neurol* 2001;50:195-201
139. Hughes RA, Donofrio P, Bril V, et al. Intravenous immune globulin (10% caprylate-chromatography purified) for the treatment of chronic inflammatory demyelinating polyradiculoneuropathy (ICE study): a randomised placebo-controlled trial. *Lancet Neurol* 2008;136-44
140. Mouthon L, Guillevin L, Tellier Z. Intravenous immunoglobulins in autoimmune- or parvovirus B19-mediated pure red-cell aplasia. *Autoimmunity Reviews* 2005;4:264-269
141. Crabol R, Terrier B, Rozenberg F, et al. Intravenous immunoglobulin therapy for pure red cell aplasia related to human parvovirus B19 infection: a retrospective study of 10 patients and review of the literature. *Clinical Infectious Disease* 2013;56(7):968-77
142. Umapathi T, Hughes RAC, Nobile-Orazio E, et al. Immunosuppressant and immunomodulatory treatments for multifocal motor neuropathy. *Cochrane Database of Systematic Reviews* 2012, Issue 4. Art. No.: CD003217. DOI: 10.1002/14651858.CD003217.pub4.
143. Karlson EW, Sudarsky L, Ruderman E, et al. Treatment of stiff-man syndrome with intravenous immune globulin. *Arthritis Rheum* 1994; 37:915.
144. Barker RA, Marsden CD. Successful treatment of stiff man syndrome with intravenous immunoglobulin. *J Neurol Neurosurg Psychiatry* 1997; 62:426.
145. Khanlou H, Eiger G. Long-term remission of refractory stiff-man syndrome after treatment with intravenous immunoglobulin. *Mayo Clin Proc* 1999; 74:1231.
146. Dalkas MC, Fujii M, Li M, et al. High-dose intravenous immune globulin for stiff-person syndrome. *N Engl J Med* 2001; 345:1870



Intravenous Immune Globulin (IVIG) & Subcutaneous Immune Globulin

POLICY NUMBER: RX.PA.068.E

REVISION DATE: 12/17

PAGE NUMBER: 17 of 17

147. International consensus guidance for management of myasthenia gravis June 2016 American Academy of Neurology

RECORD RETENTION

Records Retention for Evolent Health documents, regardless of medium, are provided within the Evolent Health records retention policy and as indicated in CORP.028.E Records Retention Policy and Procedure.

REVIEW HISTORY

DESCRIPTION OF REVIEW / REVISION	DATE APPROVED
<i>Annual Review</i>	<i>02/16, 02/17, 02/18</i>
<i>Criteria Update</i>	<i>08/17, 12/17</i>

