

Oscar Clinical Guideline: (Medicare Part B Step Therapy) Preferred Physician-Administered Specialty Drugs (CG066, Ver. 4)

Medicare Part B Step Therapy: Preferred Physician-Administered Specialty Drugs

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

Biosimilars-first Medical Preferred Medication Drug list List for Medicare Part B Step Therapy encourages the utilization of clinically appropriate and cost-effective physician-administered specialty drugs. The table below lists both the preferred and non-preferred medications within a therapeutic drug class or group.

In most cases, the preferred medications must be used first as long as they are considered safe and effective for use by your provider. Preferred medications are selected based upon clinical effectiveness and safety in alignment with FDA approved labeling or medically accepted compendia-supported literature or treatment guidelines that represent best practices. Requests for non-preferred medications will be subject to **CVS Exceptions Criteria**, and this criteria is available upon request. Approval for non-preferred medications may be provided if the member has tried and failed, or is unable to use the Plan's preferred drug(s). Qualifying exceptions may include, but are not limited to the following:

1. The member has a documented trial and failure, inadequate response, intolerance, or contraindication to the preferred drug(s); **or**
2. The member has a risk factor(s) for poor response to the preferred drug(s); **or**
3. The member is not a candidate for the preferred drug(s) based on the member's condition(s), individual needs, treatment history, or accepted standards of medical practice.

For more information or to request an exception, please contact the Plan.

Medical Preferred Drug List

Drug Class	Preferred Medications	Non-Preferred Medications subject to CVS Exceptions Criteria
Acromegaly	<ul style="list-style-type: none"> ❖ Sandostatin LAR Depot (octreotide acetate) ❖ Somatuline Depot (lanreotide) 	<ul style="list-style-type: none"> ❖ Signifor LAR (pasireotide) ❖ Somavert (pegvisomant)
Alpha-1 Antitrypsin Deficiency	<ul style="list-style-type: none"> ❖ Prolastin-C (alpha1-proteinase inhibitor [human]) 	<ul style="list-style-type: none"> ❖ Aralast NP (alpha1-proteinase inhibitor [human]) ❖ Glassia (alpha1-proteinase inhibitor[human]) ❖ Zemaira (alpha1-proteinase inhibitor [human])
Autoimmune	<ul style="list-style-type: none"> ❖ Avsola (infliximab-axxq) ❖ Entyvio (vedolizumab) ❖ Inflectra (infliximab-dyyb) ❖ Renflexis (infliximab-abda) 	<ul style="list-style-type: none"> ❖ Actemra (tocilizumab) ❖ Cimzia (certolizumab pegol) ❖ Ilumya (tildrakizumab-asmn) ❖ Infliximab ❖ Remicade (infliximab) ❖ Orencia (abatacept) ❖ Simponi Aria (golimumab) ❖ Stelara (ustekinumab)
Botulinum Toxins	<ul style="list-style-type: none"> ❖ Dysport (abobotulinumtoxinA) ❖ Xeomin (incobotulinumtoxinA) 	<ul style="list-style-type: none"> ❖ Botox (onabotulinumtoxinA) ❖ Myobloc (rimabotulinumtoxinB)
Hematologic, Erythropoiesis-Stimulating Agents (ESA)	<ul style="list-style-type: none"> ❖ Aranesp (darbepoetin alfa) ❖ Retacrit (epoetin alfa-epbx) 	<ul style="list-style-type: none"> ❖ Epogen (epoetin alfa) ❖ Mircera (epoetin beta) ❖ Procrit (epoetin alfa)

Hematologic, Neutropenia Colony Stimulating Factors, Long-Acting	<ul style="list-style-type: none"> ❖ Fulphila (pegfilgrastim-jmdb) ❖ Ziextenzo (pegfilgrastim-bmez) 	<ul style="list-style-type: none"> ❖ Neulasta (pegfilgrastim) ❖ Nyvepria (pegfilgrastim-apgf) ❖ Udenyca (pegfilgrastim-cbqv)
Hematologic, Neutropenia Colony Stimulating Factors, Short-Acting	<ul style="list-style-type: none"> ❖ Nivestym (filgrastim-aafi) ❖ Zarxio (filgrastim-sndz) 	<ul style="list-style-type: none"> ❖ Granix (tbo-filgrastim Injection) ❖ Leukine (sargramostim) ❖ Neupogen (filgrastim)
Lysosomal Storage Disorders - Gaucher Disease	<ul style="list-style-type: none"> ❖ Elelyso (taliglucerase alfa) 	<ul style="list-style-type: none"> ❖ Cerezyme (Imiglucerase) ❖ VPRIV (velaglucerase alfa for injection)
Multiple Sclerosis (Infused)	<ul style="list-style-type: none"> ❖ Tysabri (natalizumab) 	<ul style="list-style-type: none"> ❖ Lemtrada (alemtuzumab)
Osteoarthritis, Viscosupplements (Single Injection)	<ul style="list-style-type: none"> ❖ Synvisc-One (hylan G-F 20) ❖ Monovisc (high molecular weight hyaluronan) 	<ul style="list-style-type: none"> ❖ Durolane (hyaluronic acid) ❖ Gel-One (cross-linked hyaluronate)
Osteoarthritis, Viscosupplements (Multi Injection)	<ul style="list-style-type: none"> ❖ Orthovisc (high molecular weight hyaluronan) ❖ Synvisc (hylan G-F 20) 	<ul style="list-style-type: none"> ❖ Euflexxa (1% sodium hyaluronate) ❖ Gelsyn-3 (sodium hyaluronate 0.84%) ❖ GenVisc 850 (sodium hyaluronate) ❖ Hyalgan (sodium hyaluronate) ❖ Hymovis (high molecular weight viscoelastic hyaluronan) ❖ Trivisc (sodium hyaluronate) ❖ Visco-3 (sodium hyaluronate)
Prostate Cancer – Luteinizing Hormone Releasing Hormone (LHRH) Agents	<ul style="list-style-type: none"> ❖ Eligard (leuprolide acetate) 	<ul style="list-style-type: none"> ❖ Lupron Depot (leuprolide acetate for depot suspension) ❖ Trelstar (triptorelin pamoate for injectable suspension) ❖ Zoladex (goserelin implant)
Prostate Cancer – Luteinizing Hormone Releasing Hormone (LHRH) Antagonists Agents	<ul style="list-style-type: none"> ❖ Firmagon (degarelix for injection) 	

Retinal Disorders Agents	<ul style="list-style-type: none"> ❖ Avastin (bevacizumab) 	<ul style="list-style-type: none"> ❖ Beovu (brolucizumab-dbll) ❖ Eylea (aflibercept) ❖ Lucentis (ranibizumab)
Rituximab Products	<ul style="list-style-type: none"> ❖ Riabni (rituximab-arrx) ❖ Ruxience (rituximab-pvvr) ❖ Truxima (rituximab-abbs) 	<ul style="list-style-type: none"> ❖ Rituxan (rituximab) ❖ Rituxan Hycela (rituximab/hyaluronidase human)
Severe Asthma	<ul style="list-style-type: none"> ❖ Nucala (mepolizumab) ❖ Xolair (omalizumab) 	<ul style="list-style-type: none"> ❖ Cinqair (reslizumab) ❖ Fasenra (benralizumab)
Trastuzumab	<ul style="list-style-type: none"> ❖ Herzuma (trastuzumab-pkrb) ❖ Kanjinti (trastuzumab-anns) ❖ Ogivri (trastuzumab-dkst) ❖ Ontruzant (trastuzumab-dttb) ❖ Trazimera (trastuzumab-qyyp) 	<ul style="list-style-type: none"> ❖ Herceptin (trastuzumab) ❖ Herceptin Hylecta (trastuzumab and hyaluronidase-oysk)

Applicable Billing Codes

Acromegaly	
J1930	Somatuline Depot Injection, lanreotide, 1 mg
J2353	SandoSTATIN LAR Depot Injection, octreotide, depot form for intramuscular injection, 1 mg
J2502	Signifor LAR Injection, pasireotide long acting, 1 mg
J3490 J3590	Somavert Unclassified drugs Unclassified biologics
Alpha-1 Antitrypsin Deficiency	
J0256	Aralast NP Injection, alpha 1-proteinase inhibitor (human), not otherwise specified, 10 mg

J0256	Prolastin-C Injection, alpha 1-proteinase inhibitor (human), not otherwise specified, 10 mg
J0256	Zemaira Injection, alpha 1-proteinase inhibitor (human), not otherwise specified, 10 mg
J0257	Glassia Injection, alpha 1 proteinase inhibitor (human), (Glassia), 10 mg
Autoimmune	
J0129	Orencia; Orencia ClickJect Injection, abatacept, 10 mg
J0717	Cimzia; Cimzia Prefilled; Cimzia Starter Kit Injection, certolizumab pegol, 1 mg
J1602	Simponi Aria Injection, golimumab, 1 mg, for intravenous use
J1745	Remicade Injection, infliximab, excludes biosimilar, 10 mg
J1745	Injection, infliximab, 10 mg
J3245	Ilumya Injection, tildrakizumab, 1 mg
J3262	Actemra Injection, tocilizumab, 1 mg
J3357	Stelara Ustekinumab, for subcutaneous injection, 1 mg
J3358	Stelara Ustekinumab, for intravenous injection, 1 mg
J3380	Entyvio Injection, vedolizumab, 1 mg
Q5103	Inflectra Injection, infliximab-dyyb, biosimilar, (Inflectra), 10 mg
Q5104	Renflexis Injection, infliximab-abda, biosimilar, (Renflexis), 10 mg
Q5121	Avsola Injection, infliximab-axxq, biosimilar, (Avsola), 10 mg

Botulinum Toxins	
J0585	Botox Injection, onabotulinumtoxinA, 1 unit
J0586	Dysport Injection, abobotulinumtoxinA, 5 units
J0587	Myobloc Injection, rimabotulinumtoxinB, 100 units
J0588	Xeomin Injection, incobotulinumtoxinA, 1 unit
Hematologic, Erythropoiesis-Stimulating Agents (ESA)	
J0881	Aranesp Injection, darbepoetin alfa, 1 mcg (non-ESRD use)
J0882	Aranesp Injection, darbepoetin alfa, 1 mcg (for ESRD on dialysis)
J0885	Epogen Injection, epoetin alfa, (for non-ESRD use), 1000 units
J0885	Procrit Injection, epoetin alfa, (for non-ESRD use), 1000 units
J0887	Mircera Injection, epoetin beta, 1 mcg, (for ESRD on dialysis)
J0888	Mircera Injection, epoetin beta, 1 mcg, (for non-ESRD use)
Q4081	Epogen Injection, epoetin alfa, 100 units (for ESRD on dialysis)
Q4081	Procrit Injection, epoetin alfa, 100 units (for ESRD on dialysis)
Q5105	Retacrit Injection, epoetin alfa, biosimilar, (Retacrit) (for ESRD on dialysis), 100 units
Q5106	Retacrit Injection, epoetin alfa, biosimilar, (Retacrit) (for non-ESRD use), 1000 units
Hematologic, Neutropenia Colony Stimulating Factors, Long-Acting	
J2506	Neulasta Injection, pegfilgrastim, excludes biosimilar, 0.5 mg

Q5108	Fulphila Injection, pegfilgrastim-jmdb, biosimilar, (Fulphila), 0.5 mg
Q5111	Udenyca Injection, pegfilgrastim-cbqv, biosimilar, (Udenyca), 0.5 mg
Q5120	Ziextenzo Injection, pegfilgrastim-bmez, biosimilar, (Ziextenzo), 0.5 mg
Q5122	Nyvepria Injection, pegfilgrastim-apgf, biosimilar, (Nyvepria), 0.5 mg
Hematologic, Neutropenia Colony Stimulating Factors, Short-Acting	
J1442	Neupogen Injection, filgrastim (G-CSF), excludes biosimilars, 1 microgram
J1447	Granix Injection, tbo-filgrastim, 1 microgram
J2820	Leukine Injection, sargramostim (GM-CSF), 50 mcg
Q5101	Zarxio Injection, filgrastim-sndz, biosimilar, (Zarxio), 1 mcg
Q5110	Nivestym Injection, filgrastim-aafi, biosimilar, (Nivestym), 1 mcg
Lysosomal Storage Disorders - Gaucher Disease	
J1786	Cerezyme Injection, imiglucerase, 10 units
J3060	Elelyso Injection, taliglucerase alfa, 10 units
J3385	VPRIV Injection, velaglucerase alfa, 100 units
Multiple Sclerosis (Infused)	
J0202	Lemtrada Injection, alemtuzumab, 1 mg
J2323	Tysabri Injection, natalizumab, 1 mg

Osteoarthritis, Viscosupplements Single Injection	
J7318	Durolane Hyaluronan or derivative, Durolane, for intra-articular injection, 1 mg
J7325	Synvisc-One Hyaluronan or derivative, Synvisc or Synvisc-One, for intra-articular injection, 1 mg
J7326	Gel-One Hyaluronan or derivative, Gel-One, for intra-articular injection, per dose
J7327	Monovisc Hyaluronan or derivative, Monovisc, for intra-articular injection, per dose
Osteoarthritis, Viscosupplements Multi Injection	
J7320	Genvisc 850 Hyaluronan or derivative, GenVisc 850, for intra-articular injection, 1 mg
J7321	Hyalgan Hyaluronan or derivative, Hyalgan, Supartz or Visco-3, for intra-articular injection, per dose
J7321	Visco-3 Hyaluronan or derivative, Hyalgan, Supartz or Visco-3, for intra-articular injection, per dose
J7322	Hymovis Hyaluronan or derivative, Hymovis, for intra-articular injection, 1 mg
J7323	Euflexxa Hyaluronan or derivative, Euflexxa, for intra-articular injection, per dose
J7324	Orthovisc Hyaluronan or derivative, Orthovisc, for intra-articular injection, per dose
J7325	Synvisc Hyaluronan or derivative, Synvisc or Synvisc-One, for intra-articular injection, 1 mg
J7328	Gelsyn-3 Hyaluronan or derivative, Gelsyn-3, for intra-articular injection, 0.1 mg
J7329	Trivisc Hyaluronan or derivative, Trivisc, for intra-articular injection, 1 mg

Prostate Cancer – Luteinizing Hormone Releasing Hormone (LHRH) Agents	
J3315	Trelstar Injection, triptorelin pamoate, 3.75 mg
J9202	Zoladex Goserelin acetate implant, per 3.6 mg
J9217	Eligard Leuprolide acetate (for depot suspension), 7.5 mg
J9217	Leuprolide acetate (for depot suspension), 7.5 mg
Prostate Cancer – Luteinizing Hormone Releasing Hormone (LHRH) Antagonists Agents	
J9155	Firmagon Injection, degarelix, 1 mg
Retinal Disorders Agents	
C9257	Avastin Injection, bevacizumab, 0.25 mg
J0178	Eylea Injection, aflibercept, 1 mg
J0179	Beovu Injection, brolocizumab-dbl, 1 mg
J2778	Lucentis Injection, ranibizumab, 0.1 mg
J9035	Avastin Injection, bevacizumab, 10 mg
Rituximab Products	
J9311	Rituxan Hycela (rituximab/hyaluronidase human) Injection, rituximab 10 mg and hyaluronidase
J9312	Rituxan (rituximab) Injection, rituximab, 10 mg
Q5123	Riabni (rituximab-arrx) Injection, rituximab-arrx, biosimilar, (Riabni), 10 mg
Q5115	Truxima (rituximab-abbs) Injection, rituximab-abbs, biosimilar, (Truxima), 10 mg

Q5119	Ruxience (rituximab-pvvr) Injection, rituximab-pvvr, biosimilar, (Ruxience), 10 mg
Severe Asthma	
J0517	Fasenra Injection, benralizumab, 1 mg
J2182	Nucala Injection, mepolizumab, 1 mg
J2357	Xolair Injection, omalizumab, 5 mg
J2786	Cinqair Injection, reslizumab, 1 mg
Trastuzumab	
J9355	Herceptin Injection, trastuzumab, excludes biosimilar, 10 mg
J9356	Herceptin Hylecta Injection, trastuzumab, 10 mg and hyaluronidase-oysk
Q5112	Ontruzant Injection, trastuzumab-dttb, biosimilar, (Ontruzant), 10 mg
Q5113	Herzuma Injection, trastuzumab-pkrb, biosimilar, (Herzuma), 10 mg
Q5114	Ogivri Injection, trastuzumab-dkst, biosimilar, (Ogivri), 10 mg
Q5116	Trazimera Injection, trastuzumab-qyyp, biosimilar, (Trazimera), 10 mg
Q5117	Kanjinti Injection, trastuzumab-anns, biosimilar, (Kanjinti), 10 mg

References

1. Anderson LJ, Henley W, Wyatt KM, et al. Long-term effectiveness of enzyme replacement therapy in adults with Gaucher disease: results from the NCS-LSD cohort study. *J Inherit Metab Dis* 2014; 37:953.
2. Anderson LJ, Henley W, Wyatt KM, et al. Long-term effectiveness of enzyme replacement therapy in children with Gaucher disease: results from the NCS-LSD cohort study. *J Inherit Metab Dis* 2014; 37:961.

3. Baroncini D, Ghezzi A, Annovazzi PO, et al. Natalizumab versus fingolimod in patients with relapsing-remitting multiple sclerosis non-responding to first-line injectable therapies. *Mult Scler.* 2016;22(10):1315-26.
4. Busse W, Chupp G, Nagase H, et al. Anti-IL-5 treatments in patients with severe asthma by blood eosinophil thresholds: Indirect treatment comparison. *J Allergy Clin Immunol.* 2019;143(1):190-200.e20.
5. Biosimilar and interchangeable products. US Food and Drug Administration. Updated 10/23/2017. Available at <https://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/ApprovalApplications/TherapeuticBiologicApplications/Biosimilars/ucm580419.htm>.
6. Beveridge RA, Miller JA, Kales AN, et al. A comparison of efficacy of sargramostim (yeast-derived RhuGM-CSF) and filgrastim (bacteria-derived RhuG-CSF) in the therapeutic setting of chemotherapy-induced myelosuppression. *Cancer Invest* 1998; 16:366.
7. Brown DM, Kaiser PK, Michels M, et al. Ranibizumab versus verteporfin for neovascular age-related macular degeneration. *N Engl J Med.* 2006;355(14):1432-44.
8. Bridges SL, White DW, Worthing AB, et al. The Science Behind Biosimilars: Entering a New Era of Biologic Therapy. *Arthritis & Rheumatology.* 2018; 70 (3): 334-344.
9. Chakravarthy U, Harding SP, Rogers CA, et al. Alternative treatments to inhibit VEGF in age-related choroidal neovascularisation: 2-year findings of the IVAN randomised controlled trial. *Lancet.* 2013;382(9900):1258-67.
10. Chang AA, Li H, Broadhead GK, et al. Intravitreal aflibercept for treatment-resistant neovascular age-related macular degeneration. *Ophthalmology.* 2014;121(1):188-192.
11. Chakravarthy U, Adamis AP, Cunningham ET, et al. Year 2 efficacy results of 2 randomized controlled clinical trials of pegaptanib for neovascular age-related macular degeneration. *Ophthalmology.* 2006;113(9):1508.e1-25.
12. Chingcuenco F, Segal J, Kim S, Alexander C. Bioequivalence of Biosimilar Tumor Necrosis Factor- α Inhibitors Compared With Their Reference Biologics: A Systematic Review. *Ann Intern Med.* 2016;165(8):565–74. doi: 10.7326/M16-0428.
13. Charrow J, Andersson HC, Kaplan P, et al. Enzyme replacement therapy and monitoring for children with type 1 Gaucher disease: consensus recommendations. *J Pediatr* 2004; 144:112.
14. Cicardi M. Hereditary angioedema (due to C1 inhibitor deficiency): General care and long-term prophylaxis. Ed. Saini S. UpToDate. Waltham, MA. UpToDate.com
15. Gragoudas ES, Adamis AP, Cunningham ET, Feinsod M, Guyer DR. Pegaptanib for neovascular age-related macular degeneration. *N Engl J Med.* 2004;351(27):2805-16.

16. Ghigo E, Biller BM, Colao A, et al. Comparison of pegvisomant and long-acting octreotide in patients with acromegaly naïve to radiation and medical therapy. *J Endocrinol Invest*. 2009;32(11):924-33.
17. Heier JS, Brown DM, Chong V, et al. Intravitreal aflibercept (VEGF trap-eye) in wet age-related macular degeneration. *Ophthalmology*. 2012;119(12):2537-48.
18. Hoots WK. Hemophilia A and B: Routine management including prophylaxis. Ed. Mahony DH. UpToDate. Waltham, MA. UpToDate.com
19. Kalincik T, Brown JW, Robertson N, et al. Treatment effectiveness of alemtuzumab compared with natalizumab, fingolimod, and interferon beta in relapsing-remitting multiple sclerosis: a cohort study. *Lancet Neurol*. 2017;16(4):271-281.
20. Kalincik T, et al "Comparison of 5-year treatment outcomes between alemtuzumab versus natalizumab, fingolimod and interferon β -1a" ECTRIMS 2016; Abstract 251.
21. Kannicht C, Ramström M, Kohla G, et al. Characterisation of the post-translational modifications of a novel, human cell line-derived recombinant human factor VIII. *Thromb Res*. 2013;131(1):78-88.
22. Klukowska A, Szczepański T, Vdovin V, Knaub S, Jansen M, Liesner R. Novel, human cell line-derived recombinant factor VIII (Human-cl rhFVIII, Nuwiq) in children with severe haemophilia A: efficacy, safety and pharmacokinetics. *Haemophilia*. 2016;22(2):232-239.
23. Lieuw K. Many factor VIII products available in the treatment of hemophilia A: an embarrassment of riches? *J Blood Med*. 2017;8:67-73.
24. Melmed S and Katznelson L. Treatment of acromegaly. UpToDate.com. Waltham, MA. Last updated Dec 03, 2020. https://www.uptodate.com/contents/treatment-of-acromegaly?search=treatment%20of%20acromegaly&source=search_result&selectedTitle=1~87&usage_type=default&display_rank=1
25. Manis J. Overview of therapeutic monoclonal antibodies. UpToDate.com. Waltham, MA. Last updated Dec 16, 2020. https://www.uptodate.com/contents/overview-of-therapeutic-monoclonal-antibodies?search=biosimilars&source=search_result&selectedTitle=1~71&usage_type=default&display_rank=1
26. MASAC. MASAC Recommendation on SIPPET (Survey of Inhibitors in Plasma-Product-Exposed Toddlers): REsults and Recommendations for Treatment Products for Previously Untreated Patients with Hemophilia A. MASAC; 2016.
27. Martin DF, Maguire MG, Fine SL, et al. Ranibizumab and bevacizumab for treatment of neovascular age-related macular degeneration: two-year results. *Ophthalmology*. 2012;119(7):1388-98.

28. Milkovich G, Moleski RJ, Reitan JF, et al. Comparative safety of filgrastim versus sargramostim in patients receiving myelosuppressive chemotherapy. *Pharmacotherapy* 2000; 20:1432.
29. Osiri M, Dilokthornsakul P, Chokboonpium S, et al. Budget Impact of Sequential Treatment with Biologics, Biosimilars, and Targeted Synthetic Disease-Modifying Antirheumatic Drugs in Thai Patients with Rheumatoid Arthritis. *Advances in Therapy*. 2021; 38: 4885–4899.
<https://doi.org/10.1007/s12325-021-01867-8>
30. Peyvandi F, Mannucci PM, Garagiola I, et al. A Randomized Trial of Factor VIII and Neutralizing Antibodies in Hemophilia A. *N Engl J Med*. 2016;374(21):2054-64.
31. Sheth JU, Stewart MW, Khatri M, et al. Changing trends in the use of anti-vascular endothelial growth factor (anti-VEGF) biosimilars: Insights from the Vitreoretinal Society of India Biosimilars of Anti-VEGF Survey. *Indian J Ophthalmol*. 2021 Feb; 69(2): 352–356.
doi: 10.4103/ijo.IJO_2703_20
32. Stull DM, Bilmes R, Kim H, Fichtl R. Comparison of sargramostim and filgrastim in the treatment of chemotherapy-induced neutropenia. *Am J Health Syst Pharm* 2005; 62:83.
33. Smith TJ, Bohlke K, Lyman GH, et al. Recommendations for the Use of WBC Growth Factors: American Society of Clinical Oncology Clinical Practice Guideline Update. *J Clin Oncol*. 2015;33(28):3199-212.
34. Schmidt-erfurth U, Kaiser PK, Korobelnik JF, et al. Intravitreal aflibercept injection for neovascular age-related macular degeneration: ninety-six-week results of the VIEW studies. *Ophthalmology*. 2014;121(1):193-201.
35. Trainer PJ, Ezzat S, D'souza GA, Layton G, Strasburger CJ. A randomized, controlled, multicentre trial comparing pegvisomant alone with combination therapy of pegvisomant and long-acting octreotide in patients with acromegaly. *Clin Endocrinol (Oxf)*. 2009;71(4):549-57.
36. Thadhani R, Guilatco R, Hymes J, Maddux FW, Ahuja A. Switching from Epoetin Alfa (EpoGen®) to Epoetin Alfa-Epbx (Retacrit™) Using a Specified Dosing Algorithm: A Randomized, Non-Inferiority Study in Adults on Hemodialysis. *Am J Nephrol*. 2018;48(3):214-224.
37. Tiede A, Brand B, Fischer R, et al. Enhancing the pharmacokinetic properties of recombinant factor VIII: first-in-human trial of glycoPEGylated recombinant factor VIII in patients with hemophilia A. *J Thromb Haemost*. 2013;11(4):670-8.
38. Weinreb NJ, Charrow J, Andersson HC, et al. Effectiveness of enzyme replacement therapy in 1028 patients with type 1 Gaucher disease after 2 to 5 years of treatment: a report from the Gaucher Registry. *Am J Med* 2002; 113:112.
39. Wang L, Qi CH, Zhong R, Yuan C, Zhong QY. Efficacy of alemtuzumab and natalizumab in the treatment of different stages of multiple sclerosis patients. *Medicine (Baltimore)*. 2018;97(8):e9908.

40. Wenzel S. Treatment of severe asthma in adolescents and adults. Ed Bochner BS. UpToDate. Waltham, MA.
41. Wong SF, Chan HO. Effects of a formulary change from granulocyte colony-stimulating factor to granulocyte-macrophage colony-stimulating factor on outcomes in patients treated with myelosuppressive chemotherapy. *Pharmacotherapy* 2005; 25:372.
42. World Health Organization. Expert Committee on Biological Standardization. Guidelines on evaluation of similar biotherapeutic products. Geneva, 2010.
<https://www.who.int/publications/m/item/sbp-trs-977-Annex-2>

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