PRIOR AUTHORIZATION POLICY

POLICY: Proprotein Convertase Subtilisin Kexin Type 9 Inhibitors – Repatha Prior Authorization Policy

• Repatha[®] (evolocumab subcutaneous injection [single-use prefilled syringes and Pushtronex[™] system] – Amgen)

REVIEW DATE: 04/13/2022; selected revision 06/22/2022

OVERVIEW

Repatha, a proprotein convertase subtilisin kexin type 9 (PCSK9) inhibitor antibody, is indicated for the following uses:¹

- Established cardiovascular (CV) disease, in adults to reduce the risk of myocardial infarction (MI), stroke, and coronary revascularization.
- Primary hyperlipidemia (including heterozygous familial hypercholesterolemia [HeFH]), in adults as an adjunct to diet, alone or in combination with other low-density lipoprotein cholesterol (LDL-C)-lowering therapies to reduce LDL-C.
- HeFH, in pediatric patients ≥ 10 years of age, as an adjunct to diet and other LDL-C lowering therapies.
- Homozygous familial hypercholesterolemia (HoFH), as an adjunct to diet and other low-density lipoprotein (LDL)-lowering therapies (e.g., statins, ezetimibe, LDL apheresis) in patients ≥ 10 years of age and older, to reduce LDL-C.

The safety and effectiveness of Repatha have not been established in pediatric patients with HeFH or HoFH who are younger than 10 years of age. Another PCSK9 inhibitor that is available is Praluent (alirocumab subcutaneous injection). Leqvio (inclisiran subcutaneous injection), a small interfering ribonucleic acid (RNA) directed to PCSK9 messenger RNA, is a similar product. 17

Guidelines

Many guidelines are available regarding the treatment of patients with dyslipidemia. For patients with elevated LDL-C, statins are the cornerstone of therapy and recommended first-line to be used at maximally tolerated doses due to the established benefits regarding the reduction of CV risks. Atorvastatin 40 mg to 80 mg once daily (QD) and rosuvastatin 20 mg to 40 mg QD are considered high-intensity statins as they achieve LDL-C lowering of \geq 50%. Ezetimibe is usually the next therapy added.

- The American Heart Association/American College of Cardiology guidelines on the management of blood cholesterol (2018) define atherosclerotic CV disease (ASCVD) as an acute coronary syndrome, those with a history of MI, stable or unstable angina or coronary or other revascularizations, stroke, transient ischemic attack, or peripheral arterial disease. Although LDL-C thresholds are not always recognized, in general, an LDL-C < 70 mg/dL is recommended for most patients with ASCVD to reduce CV risk. Use of a PCSK9 inhibitor as an adjunct is justified if this goal is not met with maximally tolerated statins. Additionally, guidelines and reviews have recognized that patients with a coronary artery calcium or calcification score ≥ 300 Agatston units are at an increased risk of CV events. 10-13
- According to the National Lipid Association published guidelines for the screening, diagnosis, and management of pediatric and adult patients with familial hypercholesterolemia (2011), genetic testing can identify HoFH and HeFH in some cases.⁸ Also, HeFH can be diagnosed utilizing Simon Broome criteria or Dutch Lipid Clinical Network criteria. An untreated LDL-C ≥ 190 mg/dL is suggestive of familial hypercholesterolemia. Statins are the initial treatment for all

- adults with familial hypercholesterolemia, usually at high-potency doses. Ezetimibe can also be added. In general, for patients with HeFH who have not yet manifested ASCVD, LDL-C levels \leq 100 mg/dL are recommended. Other guidelines and reviews note that the addition of a PCSK9 inhibitor to a statin plus ezetimibe regimen can be considered if this goal is not achieved.^{5,9}
- The 2014 HoFH position paper from the Consensus Panel on familial hypercholesterolemia of the European Atherosclerosis Society states the diagnosis of HoFH is made based on genetic or clinical criteria.¹⁴ A definitive diagnosis can be made by genetic confirmation of two mutant alleles at the low density lipoprotein receptor, apolipoprotein B, PCSK9, or LDL receptor adaptor protein 1 gene locus. However, in some patients genetic confirmation remains elusive. Historically, HoFH has been commonly diagnosed based on LDL-C levels such as an untreated LDL-C > 500 mg/dL, or a treated LDL-C ≥ 300 mg/dL. Also confirming the diagnosis is the presence of xanthomas (cutaneous or tendinous) before 10 years of age or a family history of elevated LDL-C levels consistent with HeFH in both parents. Other clinical manifestations of HoFH include arcus cornea or xanthelasma. Initial therapy for HoFH is a high-intensity statin.¹⁴ Other guidelines note that ezetimibe and PCSK9 inhibitors can be added if further reductions are needed; Juxtapid[®] (lomitapide capsules) can be considered.⁵,¹¹0

POLICY STATEMENT

Prior Authorization is recommended for prescription benefit coverage of Repatha. All approvals are provided for the duration noted below. Due to the specialized skills required for evaluation and monitoring, approval requires Repatha to be prescribed by or in consultation with a physician who specializes in the condition being treated.

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of Repatha is recommended in those who meet the following criteria:

FDA-Approved Indications

- **1. Atherosclerotic Cardiovascular Disease.*** Approve for 1 year if the patient meets the following criteria (A, B, C, and D):
 - A) Patient is ≥ 18 years of age; AND
 - **B)** Patient has had one of the following conditions or diagnoses (i, ii, iii, iv or v):
 - i. A previous myocardial infarction or a history of an acute coronary syndrome; OR
 - ii. Angina (stable or unstable): OR
 - iii. A past history of stroke or transient ischemic attack; OR
 - iv. Peripheral arterial disease; OR
 - v. Patient has undergone a coronary or other arterial revascularization procedure in the past; AND <u>Note</u>: Examples include coronary artery bypass graft surgery, percutaneous coronary intervention, angioplasty, and coronary stent procedures.
 - C) Patient meets one of the following criteria (i or ii):
 - i. Patient meets both of the following (a and b):
 - a) Patient has tried one high-intensity statin therapy (i.e., atorvastatin ≥ 40 mg daily; rosuvastatin ≥ 20 mg daily [as a single-entity or as a combination product]) for ≥ 8 continuous weeks; AND
 - b) Low-density lipoprotein cholesterol level after this treatment remains ≥ 70 mg/dL; OR

- **ii.** Patient has been determined to be statin intolerant by meeting one of the following criteria (a or b):
 - a) Patient experienced statin-related rhabdomyolysis; OR <u>Note</u>: Rhabdomyolysis is statin-induced muscle breakdown that is associated with markedly elevated creatine kinase levels (at least 10 times the upper limit of normal), along with evidence of end organ damage which can include signs of acute renal injury (noted by substantial increases in serum creatinine [Scr] levels [a ≥ 0.5 mg/dL increase in Scr or doubling of the Scr] and/or myoglobinuria [myoglobin present in urine]); OR
 - **b)** Patient meets all of the following [(1), (2), and (3)]:
 - (1) Patient experienced skeletal-related muscle symptoms; AND Note: Examples of skeletal-related muscle symptoms include myopathy (muscle weakness) or myalgia (muscle aches, soreness, stiffness, or tenderness).
 - (2) The skeletal-related muscle symptoms occurred while receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products); AND
 - (3) When receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products) the skeletal-related muscle symptoms resolved upon discontinuation of each respective statin therapy (atorvastatin and rosuvastatin); AND Note: Examples of skeletal-related muscle symptoms include myopathy and myalgia.
- **D)** Medication is prescribed by, or in consultation with, a cardiologist; an endocrinologist; or a physician who focuses in the treatment of cardiovascular (CV) risk management and/or lipid disorders.
- **2. Heterozygous Familial Hypercholesterolemia (HeFH).*** Approve for 1 year if the patient meets the following criteria (A, B, C, and D):
 - A) Patient is ≥ 10 years of age; AND
 - **B)** Patient meets one of the following criteria (i, ii, or iii):
 - i. Patient has an untreated low-density lipoprotein cholesterol (LDL-C) ≥ 190 mg/dL (prior to treatment with antihyperlipidemic agents); OR
 - **ii.** Patient has genetic confirmation of heterozygous familial hypercholesterolemia by mutations in the low-density lipoprotein receptor, apolipoprotein B, proprotein convertase subtilisin kexin type 9, or low-density lipoprotein receptor adaptor protein 1 gene; OR
 - **iii.** Patient has been diagnosed with heterozygous familial hypercholesterolemia by meeting one of the following diagnostic criteria thresholds (a <u>or</u> b):
 - a) Patient meets both of the following [(1) and (2)]:
 - (1) Prescriber used the Dutch Lipid Network criteria to diagnose HeFH; AND
 - (2) Patient had a score > 5; OR
 - **b)** Patient meets both of the following [(1) and (2)]:
 - (1) Prescriber used the Simon Broome criteria to diagnose heterozygous familial hypercholesterolemia; AND
 - (2) Patient met the threshold for "definite" or "possible (or probable)" familial hypercholesterolemia; AND
 - C) Patient meets one of the following criteria (i or ii):
 - i. Patient meets both of the following criteria (a and b):
 - a) Patient has tried one high-intensity statin therapy (i.e., atorvastatin ≥ 40 mg daily; rosuvastatin ≥ 20 mg daily [as a single-entity or as a combination product]) for ≥ 8 continuous weeks; AND
 - **b)** LDL-C level after this treatment remains $\geq 70 \text{ mg/dL}$; OR
 - **ii.** Patient has been determined to be statin intolerant by meeting one of the following criteria (a or b):
 - a) Patient experienced statin-related rhabdomyolysis; OR

<u>Note</u>: Rhabdomyolysis is statin-induced muscle breakdown that is associated with markedly elevated creatine kinase levels (at least 10 times the upper limit of normal), along with evidence of end organ damage which can include signs of acute renal injury (noted by substantial increases in serum creatinine [Scr] levels [a \geq 0.5 mg/dL increase in Scr or doubling of the Scr] and/or myoglobinuria [myoglobin present in urine]); OR

- **b)** Patient meets all of the following [(1), (2), and (3)]:
 - (1) Patient experienced skeletal-related muscle symptoms; AND Note: Examples of skeletal-related muscle symptoms include myopathy (muscle weakness) or myalgia (muscle aches, soreness, stiffness, or tenderness).
 - (2) The skeletal-related muscle symptoms occurred while receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products); AND
 - (3) When receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products) the skeletal-related muscle symptoms resolved upon discontinuation of each respective statin therapy (atorvastatin and rosuvastatin); AND Note: Examples of skeletal-related muscle symptoms include myopathy and myalgia.
- **D)** Medication is prescribed by or in consultation with a cardiologist, an endocrinologist, or a physician who focuses in the treatment of cardiovascular risk management and/or lipid disorders.
- **3. Homozygous Familial Hypercholesterolemia (HoFH).*** Approve for 1 year if the patient meets the following criteria (A, B, C, and D):
 - A) Patient is ≥ 10 years of age; AND
 - **B**) Patient meets one of the following (i, ii, or iii):
 - i. Patient has genetic confirmation of two mutant alleles at the low-density lipoprotein receptor, apolipoprotein B, proprotein convertase subtilisin kexin type 9 (PCSK9), or low-density lipoprotein receptor adaptor protein 1 gene locus; OR
 - ii. Patient has an untreated low-density lipoprotein cholesterol (LDL-C) level > 500 mg/dL AND meets one of the following (a or b):

Note: Untreated refers to therapy with any antihyperlipidemic agent.

- a) Patient had clinical manifestations of homozygous familial hypercholesterolemia before 10 years of age; OR
 - <u>Note</u>: Clinical manifestations of homozygous familial hypercholesterolemia are cutaneous xanthomas, tendon xanthomas, arcus cornea, tuberous xanthomas, or xanthelasma.
- **b**) Both parents of the patient had untreated LDL-C levels or total cholesterol levels consistent with heterozygous familial hypercholesterolemia; OR
 - Note: An example of heterozygous familial hypercholesterolemia in both parents would be if both had an untreated LDL-C level ≥ 190 mg/dL and/or an untreated total cholesterol level > 250 mg/dL.
- iii. Patient has a treated LDL-C level ≥ 300 mg/dL AND meets one of the following (a or b):

 Note: Treated refers to after therapy with at least one antihyperlipidemic agent. Some examples of antihyperlipidemic agents include statins (e.g., atorvastatin, rosuvastatin, lovastatin, simvastatin, pravastatin), ezetimibe, a PCSK9 inhibitor (e.g., Praluent [alirocumab subcutaneous injection]), Evkeeza (evinacumab-dgnb intravenous infusion), or Juxtapid (lomitapide capsules).
 - a) Patient had clinical manifestations of homozygous familial hypercholesterolemia before 10 years of age; OR
 - <u>Note</u>: Examples of clinical manifestations of homozygous familial hypercholesterolemia are cutaneous xanthomas, tendon xanthomas, arcus cornea, tuberous xanthomas or xanthelasma.
 - **b)** Both parents of the patient had untreated LDL-C levels or total cholesterol levels consistent with heterozygous familial hypercholesterolemia; AND

Note: An example of heterozygous familial hypercholesterolemia in both parents would be if both had an untreated LDL-C \geq 190 mg/dL and/or an untreated total cholesterol \geq 250 mg/dL.

- C) Patient meets one of the following criteria (i or ii):
 - i. Patient meets both of the following (a and b):
 - a) Patient has tried one high-intensity statin therapy (i.e., atorvastatin \geq 40 mg daily; rosuvastatin \geq 20 mg daily [as a single-entity or as a combination product]) for \geq 8 continuous weeks; AND
 - **b)** LDL-C level after this treatment remains $\geq 70 \text{ mg/dL}$; OR
 - ii. Patient has been determined to be statin intolerant by meeting one of the following criteria (a or b):
 - a) Patient experienced statin-related rhabdomyolysis; OR

Note: Rhabdomyolysis is statin-induced muscle breakdown that is associated with markedly elevated creatine kinase levels (at least 10 times the upper limit of normal), along with evidence of end organ damage which can include signs of acute renal injury (noted by substantial increases in serum creatinine [Scr] levels [a \geq 0.5 mg/dL increase in Scr or doubling of the Scr] and/or myoglobinuria [myoglobin present in urine]); OR

- **b)** Patient meets all of the following criteria [(1), (2), and (3)]:
 - (1) Patient experienced skeletal-related muscle symptoms; AND Note: Examples of skeletal-related muscle symptoms include myopathy (muscle weakness) or myalgia (muscle aches, soreness, stiffness, or tenderness).
 - (2) The skeletal-related muscle symptoms occurred while receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products); AND
 - (3) When receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products) the skeletal-related muscle symptoms resolved upon discontinuation of each respective statin therapy (atorvastatin and rosuvastatin); AND Note: Examples of skeletal-related muscle symptoms include myopathy or myalgia.
- **D)** Medication is prescribed by or in consultation with a cardiologist, an endocrinologist, or a physician who focuses in the treatment of cardiovascular risk management and/or lipid disorders.
- **4. Primary Hyperlipidemia.*** Approve for 1 year if the patient meets the following criteria (A, B, C, <u>and</u> D):

<u>Note</u>: This is not associated with atherosclerotic cardiovascular disease (ASCVD), heterozygous familial hypercholesterolemia (HeFH), or homozygous familial hypercholesterolemia (HoFH) and may be referred to as combined hyperlipidemia, hypercholesterolemia (pure, primary), dyslipidemia, or increased/elevated low-density lipoprotein cholesterol (LDL-C) levels.

- A) Patient is ≥ 18 years of age; AND
- **B)** Patient has a coronary artery calcium or calcification score ≥ 300 Agatston units; AND
- C) Patient meets one of the following criteria (i or ii):
 - i. Patient meets all of the following criteria (a, b, and c):
 - a) Patient has tried one high-intensity statin therapy (i.e., atorvastatin \geq 40 mg daily; rosuvastatin \geq 20 mg daily [as a single-entity or as a combination product]); AND
 - **b**) Patient has tried one high-intensity statin therapy above along with ezetimibe (as a single-entity or as a combination product) for ≥ 8 continuous weeks; AND
 - c) LDL-C level after this treatment regimen remains $\geq 100 \text{ mg/dL}$; OR
 - **ii.** Patient has been determined to be statin intolerant by meeting one of the following criteria (a or b):
 - a) Patient experienced statin-related rhabdomyolysis; OR Note: Rhabdomyolysis is statin-induced muscle breakdown that is associated with markedly elevated creatine kinase levels (at least 10 times the upper limit of normal), along with evidence of end organ damage which can include signs of acute renal injury (noted

- by substantial increases in serum creatinine [Scr] levels [a \geq 0.5 mg/dL increase in Scr or doubling of the Scr] and/or myoglobinuria [myoglobin present in urine]); OR
- **b)** Patient meets all of the following [(1), (2), and (3)]:
 - (1) Patient experienced skeletal-related muscle symptoms; AND Note: Examples of skeletal-related muscle symptoms include myopathy (muscle weakness) or myalgia (muscle aches, soreness, stiffness, or tenderness).
 - (2) The skeletal-related muscle symptoms occurred while receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products); AND
 - (3) When receiving separate trials of both atorvastatin and rosuvastatin (as single-entity or as combination products) the skeletal-related muscle symptoms resolved upon discontinuation of each respective statin therapy (atorvastatin and rosuvastatin); AND Note: Examples of skeletal-related muscle symptoms include myopathy or myalgia.
- **D)** Medication is prescribed by or in consultation with a cardiologist, an endocrinologist, or a physician who focuses in the treatment of cardiovascular risk management and/or lipid disorders.

Note:

* A patient may have a diagnoses that pertain to more than one FDA-approved indication, therefore, consider review under different approval conditions, if applicable (e.g., a patient with heterozygous familial hypercholesterolemia or homozygous familial hypercholesterolemia may have had a clinical ASCVD event, a patient with primary hyperlipidemia may have heterozygous familial hypercholesterolemia).

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Coverage of Repatha is not recommended in the following situations:

- 1. Concurrent use of Repatha with Praluent (alirocumab subcutaneous injection) or Leqvio (inclisiran subcutaneous injection). Praluent is another PCSK9 inhibitor and should not be used with Repatha.² Leqvio, a small interfering ribonucleic acid (RNA) directed to PCSK9 messenger RNA, is a similar product and should not be given with Repatha.¹⁷
- **2.** Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

REFERENCES

- 1. Repatha® subcutaneous injection [prescribing information]. Thousand Oaks, CA: Amgen; September 2021.
- 2. Praluent® subcutaneous injection [prescribing information]. Tarrytown, NY: Regeneron Pharmaceuticals; April 2021.
- 3. Stone NJ, Robinson J, Lichtenstein AH, et al. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice guidelines. *Circulation*. 2014;129(25 Suppl 2):S1-S45. Available at http://circ.ahajournals.org/content/early/2013/11/11/01.cir.0000437738.63853.7a. Accessed on April 11, 2022.
- Lloyd-Jones DM, Morris, PB, Ballantyne CM, et al. 2016 ACC Expert Consensus Decision Pathway on the Role of Non-Statin therapies for LDL-Cholesterol Lowering in the Management of Atherosclerotic Cardiovascular Disease Risk. *J Am Coll Cardiol*. 2016;68(1):92-125.
- 5. Lloyd-Jones DM, Morris PB, Ballantyne CM, et al. 2017 Focused Update of the 2016 ACC Expert Consensus Decision Pathway on the Role of Non-Statin Therapies for LDL-Cholesterol Lowering in the Management of Atherosclerotic Cardiovascular Disease. *J Am Coll Cardiol*. 2017;70(14):1785-1822.
- Jacobson TA, Ito MK, Maki KC, et al. National Lipid Association recommendations for patient-centered management of dyslipidemia: Part 1-executive summary. J Clin Lipidol. 2014;8:473-488. Available at: http://www.lipidjournal.com/article/S1933-2874(14)00274-8/pdf. Accessed on April 11, 2022.
- 7. Jacobson TA, Ito MK, Maki KC, et al. National Lipid Association recommendations for patient-centered management of dyslipidemia: Part 1-full report. *J Clin Lipidol*. 2015;9:129-169. Available at: http://www.lipidjournal.com/article/S1933-2874(15)00059-8/pdf. Accessed on April 11, 2022.

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- 8. Goldberg AC, Hopkins PN, Toth PP, et al. Familial hypercholesterolemia: screening, diagnosis and management of pediatric and adult patients. *J Clin Lipidol*. 2011;5:S1-S8.
- 9. Orringer CE, Jacobson TA, Saseen JJ, et al. Update on the use of PCSK9 inhibitors in adults: recommendations from an Expert Panel of the National Lipid Association. *J Clin Lipid*. 2017;11:880-890. Available at: http://www.lipidjournal.com/article/S1933-2874(17)30290-8/pdf. Accessed on April 11, 2022.
- Grundy SM, Stone NJ, Bailey AL, et al. AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of blood cholesterol. A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;139:e1082-e1143. Available at: https://www.ahajournals.org/doi/pdf/10.1161/CIR.00000000000000625. Accessed on April 11, 2022.
- Hect HS, Cronin P, Blaha M, et al. 2016 SCCT/STR guidelines for coronary artery calcium scoring of noncontrast noncardiac chest CT scans: A report of the Society of Cardiovascular Computed Tomography and Society of Thoracic Radiology. J Thorac Imaging. 2017;32(5):W54-S66.
- 12. Blaha MJ, Mortensen MB, Kianoush S, et al. Coronary artery calcium scoring. Is it time for a change in methodology. *J Am Coll Cardiol Imag.* 2017;10:923-937.
- 13. Burge MR, Eaton RP, Comerci G, et al. Management of asymptomatic patients with positive coronary artery calcium scans. *J Endocr Soc.* 2017;1(6):588-599.
- 14. Cuchel M, Bruckert E, Ginsberg HN, et al, for the European Atherosclerosis Society Consensus Panel on Familial Hypercholesterolemia. Homozygous familial hypercholesterolaemia: new insights and guidance for clinicians to improve detection and clinical management. A position paper from the Consensus Panel on Familial Hypercholestolaemia of the European Atherosclerosis Society. *Eur Heart J.* 2014;35:2146-2157.
- 15. Haase A, Goldberg AC. Identification of people with heterozygous familial hypercholesterolemia. *Curr Opin Lipidol*. 2012;23:282-289.
- 16. Gidding SS, Champagne MA, de Ferranti SD, et al. The agenda for familial hypercholesterolemia. A scientific statement from the American Heart Association. *Circulation*. 2015;132(22):2167-2192.
- 17. Legvio[®] subcutaneous injection [prescribing information]. East Hanover, NJ: Novartis; December 2021.

HISTORY

Type of	Summary of Changes	Review Date
Revision Early Annual Revision	The following changes were made: Atherosclerotic Cardiovascular Disease: To the criteria that the patient have skeletal- related muscle symptoms resolve upon discontinuation of atorvastatin and rosuvastatin, examples of skeletal-related muscle symptoms (myopathy and myalgia) were added as a Note. HeFH: The diagnostic criteria that the patient has a treated LDL-C level ≥ 100 mg/dL (after treatment with antihyperlipidemic agents but prior to PCSK9 inhibitor therapy such as Praluent [alirocumab injection for subcutaneous use] or Repatha [evolocumab injection for subcutaneous use]) were removed. Also, the diagnostic criteria that the patient has clinical	04/07/2021
	manifestations of HeFH were removed. For the diagnostic Simon Broome criteria, the word "probable" was added for meeting the threshold of "possible" familial hypercholesterolemia (written as "possible [or probable]"). To the criteria that the patient have skeletal-related muscle symptoms resolve upon discontinuation of atorvastatin and rosuvastatin, examples of skeletal-related muscle symptoms (myopathy and myalgia) were added as a Note. HoFH: The diagnostic criteria for HoFH were revised (current criteria Bii and Biii). To the criteria which stated that the patient has clinical manifestation of HoFH, the qualifier of "before the age of 10 years" was added. Also, this criterion is no longer an independent diagnostic but is now one of two criteria that must be met under the LDL-C threshold requirements (i.e., that the patient has an untreated LDL-C level > 500 mg/dL or a treated LDL-C ≥ 300 mg/dL). An additional criterion added to the two LDL-C threshold	
	requirements is that the parents of the patient had untreated LDL-C levels or total cholesterol levels consistent with HeFH with examples of these values provided. If the diagnostic pathway is sought through LDL-C thresholds, one of these two criteria must be met (i.e., clinical manifestations or parents of the patient have LDL-C or total cholesterol levels consistent with HeFH). To the criteria that the patient have skeletal-related muscle symptoms resolve upon discontinuation of atorvastatin and rosuvastatin, examples of skeletal-related	
	muscle symptoms (myopathy and myalgia) were added as a Note. Primary Hyperlipidemia. To the criteria that the patient have skeletal-related muscle symptoms resolve upon discontinuation of atorvastatin and rosuvastatin, examples of skeletal-related muscle symptoms (myopathy and myalgia) were added as a Note. Conditions Not Recommended for Approval. The criteria that did not permit Repatha use with Juxtapid were deleted. Concurrent use of Repatha and Praluent is still not allowed.	
Selected Revision	 HoFH: The age threshold for this indication was changed from ≥ 13 years of age to ≥ 10 years of age. HeFH: The age threshold for this indication was changed from ≥ 18 years of age to ≥ 10 years of age. 	10/06/2021
Annual Revision	Atherosclerotic Cardiovascular Disease: The notation of "[Clinical]" was removed from the cited indication. Conditions Not Recommended for Approval: It was added that concurrent use of Repatha and Leqvio is not allowed.	04/13/2022
Selected Revision	Atherosclerotic Cardiovascular Disease: The approval duration was changed from 3 years to 1 year. Heterozygous Familial Hypercholesterolemia: The approval duration was changed from 3 years to 1 year. Homozygous Familial Hypercholesterolemia: The approval duration was changed from 3 years to 1 year. Primary Hyperlipidemia: The approval duration was changed from 3 years to 1 year.	06/22/2022

HeFH – Heterozygous familial hypercholesterolemia; LDL-C – Low-density lipoprotein cholesterol; PCSK9 – Proprotein convertase subtilisin kexin type 9; HoFH – Homozygous familial hypercholesterolemia.

APPENDIX A

Simon Broome Register Diagnostic Criteria. 15

Definite Familial Hypercholesterolemia

Raised cholesterol

- --Total cholesterol greater than 6.7 mmol/L (260 mg/dL) or LDL-C > 4.0 mmol/L (155 mg/dL) in a child < 16 years; OR
- --Total cholesterol > 7.5 mmol/L (290 mg/dL) or LDL-C > 4.9 mmol/L (190 mg/dL) in an adult (aged > 16 years);

AND

--Tendon xanthomas in the patient or in a first (parent, sibling, or child) or second-degree relative (grandparent, aunt, or uncle);

OR

DNA-based evidence of LDL-receptor, familial defective APOB, or PCSK9 mutation.

Possible (or Probable) Familial Hypercholesterolemia

Raised cholesterol

- --Total cholesterol greater than 6.7 mmol/L (260 mg/dL) or LDL-C > 4.0 mmol/L (155 mg/dL) in a child < 16 years; OR
- --Total cholesterol > 7.5 mmol/L (290 mg/dL) or LDL-C > 4.9 mmol/L (190 mg/dL) in an adult (aged > 16 years);

AND

Family history of premature myocardial infarction younger than 50 years of age in second-degree relative or younger than 60 years of age in first-degree relative;

OR

Raised cholesterol

- --Total cholesterol greater than 6.7 mmol/L (260 mg/dL) or LDL-C > 4.0 mmol/L (155 mg/dL) in a child < 16 years; OR
- --Total cholesterol > 7.5 mmol/L (290 mg/dL) or LDL-C > 4.9 mmol/L (190 mg/dL) in an adult (aged > 16 years);

AND

Family history of raised cholesterol > 7.5 mmol (290 mg/dL) in adult first-degree or second-degree relative or > 6.7 mmol/L (260 mg/dL) in child or sibling aged < 16 years.

LDL-C – Low-density lipoprotein cholesterol; LDL – Low-density lipoprotein; APOB – Apolipoprotein B; PCSK9 – Proprotein convertase subtilisin kexin type 9.

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APPENDIX B.

Dutch Lipid Network Criteria. 16

 $LDL-C-Low-density\ lipoprotein\ cholesterol;\ CAD-Coronary\ artery\ disease;\ LDLR-Low-density\ lipoprotein\ receptor;\ APOB$ - Apolipoprotein B; PCSK9 - Proprotein convertase subtilisin kexin type 9.