

SPECIALTY GUIDELINE MANAGEMENT

KYNAMRO (mipomersen)

POLICY

I. INDICATIONS

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met and the member has no exclusions to the prescribed therapy.

FDA-Approved Indication

Kynamro is indicated as an adjunct to lipid-lowering medications and diet to reduce low density lipoprotein-cholesterol (LDL-C), apolipoprotein B (apo B), total cholesterol, and non-high density lipoprotein-cholesterol (non-HDL-C) in patients with homozygous familial hypercholesterolemia (HoFH).

All other indications are considered experimental/investigational and not medically necessary.

II. DOCUMENTATION

Submission of documentation supporting the diagnosis of homozygous familial hypercholesterolemia per Appendix A or B is necessary to initiate the prior authorization review.

III. CRITERIA FOR INITIAL APPROVAL

Homozygous familial hypercholesterolemia (HoFH)

Authorization for 6 months may be granted for members who meet all of the criteria listed below:

- A. Member has a documented diagnosis of HoFH confirmed by genetic analysis or clinical criteria (See Appendices).
- B. Prior to initiation of treatment with Kynamro, patient is/was receiving a combination lipid-lowering regimen consisting of a high-intensity statin, ezetimibe, and evolocumab (Repatha), unless the member has known LDL-receptor negative mutations in both alleles.
- C. Prior to initiation of treatment with Kynamro, patient is/was experiencing an inadequate response to such a combination regimen, as demonstrated a treated LDL-C of greater than or equal to 100 mg/dL (or greater than or equal to 70 mg/dL with clinical atherosclerotic cardiovascular disease [ASCVD]), unless the member has known LDL-receptor negative mutations in both alleles.

IV. CONTINUATION OF THERAPY

Authorization of 12 months may be granted for members (including new members) who meet all initial authorization criteria and have achieved or maintained a LDL-C reduction greater than 20% from the levels immediately prior to initiation of treatment with Kynamro.

V. APPENDICES

APPENDIX A. Diagnosis of Homozygous Familial Hypercholesterolemia

- Genetic confirmation
 - Mutations in both alleles at LDL receptor, ApoB, PCSK9 or LDL receptor adaptor protein gene locus
- Clinical diagnosis
 - Untreated LDL-C > 500 mg/dL OR unknown untreated LDL-C with treated LDL-C > 300 mg/dL **plus**
 - One of the following:
 - Tendon or cutaneous xanthomas at age 10 or younger
 - Diagnosis of familial hypercholesterolemia (FH) by Simon-Broome Diagnostic Criteria or Dutch Lipid Clinic Network Criteria (See Appendix B) in both parents
 - Evidence of FH in both parents with a history including any of the following:
 - Total cholesterol \geq 310 mg/dL
 - Premature ASCVD (before 55 years in men and 60 years in women)
 - Tendon xanthoma
 - Sudden premature cardiac death

APPENDIX B: Diagnosis of familial hypercholesterolemia (FH)

A diagnosis of FH is made when one of the following diagnostic criteria is met:

- Genetic confirmation
 - An LDL-receptor mutation, familial defective apo B-100, or a PCSK9 gain-of-function mutation
- Simon-Broome Diagnostic Criteria for FH
 - Total cholesterol > 290 mg/dL or LDL-C > 190 mg/dL in patients over 16 years of age or total cholesterol > 260 mg/dL or LDL-C > 155 mg/dL in patients less than 16 years of age and one of the following
 - Tendon xanthomas in the patient, first (parent, sibling or child) or second degree relative (grandparent, uncle or aunt)
 - Family history of myocardial infarction in a first degree relative before the age of 60 or in a second degree relative before the age of 50
 - Total cholesterol greater than 290 mg/dL in an adult first or second degree relative
 - Total cholesterol greater than 260 mg/dL in a child, brother, or sister aged younger than 16 years
- Dutch Lipid Clinic Network Criteria for FH
 - Total score > 5 points

VI. REFERENCES

1. Kynamro [package insert]. Cambridge, MA: Genzyme Corporation, Inc.; May 2016.
2. Nordestgaard BG, Chapman MJ, Humphries SE, et al. Familial hypercholesterolaemia is underdiagnosed and undertreated in the general population: guidance for clinicians to prevent coronary heart disease. Consensus Statement of the European Atherosclerosis Society. *Eur Heart J*. 2013;34:3478–3490.
3. Cuchel M, Bruckert E, Ginsberg HN, et al. Homozygous familial hypercholesterolaemia: new insights and guidance for clinicians to improve detection and clinical management. A position paper from the Consensus Panel on Familial Hypercholesterolaemia of the European Atherosclerosis Society. *Eur Heart J*. 2014;35:2146-2157.
4. National Institute for Health and Clinical Excellence (2008). Identification and management of familial hypercholesterolaemia. NICE clinical guideline 71.
5. Raal JF, Santos RD, Blom DJ, et al. Mipomersen, an apolipoprotein B Synthesis inhibitor, for lowering of LDL cholesterol concentrations in patients with homozygous familial hypercholesterolaemia: a randomized, double-blind, placebo-controlled trial. *Lancet*. 2010;375:998-1006.
6. Goldberg AC, Hopkins PN, Toth PP, et al. Familial hypercholesterolemia: screening, diagnosis and management of pediatric and adult patients. Clinical guidance from the National Lipid Association Expert Panel on Familial Hypercholesterolemia. *J Clin Lipidol*. 2011;5:S1–S8.
7. Raal JF, Santos RD. Homozygous familial hypercholesterolemia: current perspectives on diagnosis and treatment. *Atherosclerosis*. 2012;223:262-268.

8. Liposorber System [package insert]. New York, NY: Kaneka Pharma America, LLC. Available at <http://www.liposorber.com/physician/prescribe/prescribe.htm>. Accessed: December 6, 2017.
9. Moriarty PM. LDL-apheresis therapy: current therapeutic practice and potential future use. *Future Lipidol*. 2006;3:299-308.
10. Bays HE, Jones PH, Orringer CE, et al. National Lipid Annual Summary of Clinical Lipidology 2016. *J Clin Lipidol* 2016; 10:S1-S43.
11. Lloyd-Jones DM, Morris PB, Ballantyne CM, Birtcher KK, Daly DD Jr., DePalma SM, Minissian MB, Orringer CE, Smith SC Jr. 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 risk: a report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents. *J Am Coll Cardiol* 2017;70:1785–822.

DOCUMENT HISTORY

Written: Specialty Clinical Development (HY) 01/2013
 Revised: HY 02/2013 (added Kynamro), 08/2013 (updated references), 11/2013, 12/2014 (separated from Lipid Disorders SGM), DK 12/2015, TS 10/2016, TS 06/2017 (simplification), LP 12/2017, JC 11/2018, JC 06/2019 (AA), NU 11/2019
 Reviewed: CDPR/LMS 01/2013; DNC 02/2013, LMS 02/2013; SES 11/2013, 12/2014; KRU 03/2015, DHR 12/2015, SD 12/2016, SD 07/2017, ME 12/2017, EPA 11/2018, JG 06/2019, CHART 11/27/2019
 External Review: 01/2013, 02/2013, 12/2013, 01/2015, 01/2016, 01/2017, 01/2018, 01/2019, 07/2019, 01/2020