

09-J4000-10

Original Effective Date: 01/01/22

Reviewed: 09/11/24

Revised: 06/15/25

Subject: Maralixibat (Livmarli®) Oral Solution

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Dosage/ Administration	Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions
Related Guidelines	Other	References	Updates		

DESCRIPTION:

Maralixibat (Livmarli) in an oral solution first approved by the U.S. Food and Drug Administration (FDA) in September 2021 for the treatment of cholestatic pruritus in patients with Alagille syndrome (ALGS) 1 year of age and older. In March 2023, this indication was expanded to include patients 3 months of age and older based on an open-label, multicenter study which showed a similar safety, tolerability, and pharmacokinetic profile to patients with ALGS >12 months of age. In March 2024, a new indication was FDA approved for the treatment of cholestatic pruritus in patients 5 years of age and older with progressive familial intrahepatic cholestasis (PFIC). In July 2024, the FDA approved a label update expanding the age for PFIC to include patients who are 12 months of age and older. Along with the age expansion, a 19 mg/mL concentration was released (in addition to the previously available 9.5 mg/mL oral solution). This concentration is exclusively used for patients diagnosed with PFIC. In April 2025; 10, 15, 20, and 30 mg strength tablets were released. The tablets can be used for treatment of both ALGS and PFIC in patients weighing 25 kg (55 lbs) and above who can swallow tablets. Selection of the oral solution or tablets is based on the patient's weight and ability to swallow tablets. Maralixibat is a non-systemic, reversible inhibitor of the ileal bile acid transporter (IBAT) that decreases the reabsorption of bile acids (primarily the salt forms) from the terminal ileum. It is the second IBAT inhibitor to be approved; the first being odevixibat (Bylvay).

Alagille syndrome is a rare, autosomal dominant genetic disorder that can affect multiple organ systems, including the liver, heart, skeleton, eyes, and kidneys. Most patients have mutations in one copy of the *JAG1* gene, but a small percentage (2%) have mutations of the *NOTCH2* gene. The estimated incidence of ALGS is approximately 1/30,000 to 1/45,000. The specific symptoms and severity of ALGS can vary greatly from one person to another. Approximately 90% of individuals with ALGS have a reduced number of bile ducts (bile duct paucity) that can progress to liver disease. Patients may present in the first 3 months of life with cholestasis, jaundice, poor weight gain and growth, and pruritus. Many

individuals with ALGS also have heart abnormalities that can range from benign heart murmurs to serious structural defects. Individuals usually have distinctive facial features including deeply set and widely spaced (hypertelorism) eyes, a pointed chin, and broad forehead. One of the more problematic manifestations of ALGS is pruritus, which can lead to physical abrasions and scarring, as well as functional impacts (e.g., sleep and mood disorders) and deterioration in quality of life.

Progressive familial intrahepatic cholestasis (PFIC) is an ultra-rare, heterogeneous group of liver disorders of autosomal recessive inheritance that disrupt bile formation and are characterized by an early onset of cholestasis with pruritus and malabsorption, which rapidly progresses, eventually leading to liver failure. Most patients with PFIC require biliary diversion surgery or liver transplant by 30 years of age or earlier. The suspected incidence of PFIC is between 1 in 50,000 and 1 in 100,000 births and an estimated 600 children in the United States are afflicted. While PFIC types 1, 2, and 3 are the most common, new subtypes are still being discovered. Each subtype is uniquely categorized based on the mutated gene and resultant protein deficiency. For example, PFIC1 is due to a mutation in the ATP8B1 gene that encodes the FIC1 (familial intrahepatic cholestasis 1) protein, and PFIC2 is due to a mutation in the ABCB11 gene that encodes the BSEP (bile salt export pump). Each subtype has a unique clinical presentation, management strategies, and outcomes. Initial care for patients with PFIC addresses nutritional problems, including supplementation with and monitoring of fat-soluble vitamins. However, the most prominent and problematic manifestation of PFIC (in particular in types 1 and 2) is pruritus, which can lead to physical abrasions and scarring, as well as functional impacts (e.g., sleep and mood disorders) and deterioration in overall quality of life. Therapy-refractory persistent pruritus can be an indication for liver transplantation, even in the absence of liver failure. Liver transplantation is generally curative for patients with PFIC 1 and 2; however, patients with PFIC1 may have ongoing disease due to the extrahepatic expression of the FIC1 protein.

Maralixibat was the first pharmacologic therapy specifically approved for ALGS. A second IBAT inhibitor, odeixibat (Livmarli), was approved for ALGS in June 2023. Before IBAT inhibitor therapy, treatment relied on supportive pharmacologic therapy for symptomatic relief (e.g., ursodiol, rifampicin, cholestyramine, antihistamines) or surgical intervention (e.g., surgical biliary diversion, liver transplantation). According to the European Association for the Study of the Liver (EASL) guidelines, ursodiol is often a first-line medication for cholestasis although its effect on pruritus varies, and the guidelines note that for ALGS specifically no effective medical treatment is known (prior to maralixibat). Rifampicin counteracts pruritus by increasing the metabolism of pruritogenic substances, prompting their renal elimination in hydroxylated forms. In addition, the antibacterial effect of rifampicin in the intestine may potentially modify the intestinal metabolism of pruritogenic substances. Because this treatment is well tolerated, and its efficacy has been demonstrated, rifampicin is widely considered a first-line treatment for cholestatic pruritus in children. The anion exchange resin cholestyramine was initially the only approved medication for cholestatic pruritus; however, its inconsistent efficacy and poor tolerance (nausea, constipation, diarrhea) often limits its use in children.

The safety and efficacy of maralixibat leading to FDA approval for Alagille syndrome was evaluated in the Phase 2 ICONIC study (NCT02160782, Trial 1 in the product labeling), which consisted of an 18-week open-label treatment period; a 4-week randomized, double-blind, placebo-controlled drug-withdrawal period; a subsequent 26-week open-label treatment period; and a long-term open-label extension period. Thirty-one pediatric Alagille syndrome patients with cholestasis and pruritus were enrolled, with 90.3% of patients receiving at least one medication to treat pruritus at study entry. All patients had

JAGGED1 mutation. Patients were administered open-label treatment with maralixibat 380 mcg/kg once daily for 13 weeks after an initial 5-week dose-escalation period; two patients discontinued treatment during this first 18 weeks of open-label treatment. The 29 patients who completed the open-label treatment phase were then randomized to continue treatment with maralixibat or receive matching placebo during the 4-week drug withdrawal period at Weeks 19 to 22 (n=16 placebo, n=13 maralixibat). All 29 patients completed the randomized, blinded drug withdrawal period; subsequently, patients received open label maralixibat at 380 mcg/kg once daily for an additional 26 weeks. Randomized patients had a median age of 5 years (range: 1 to 15 years) and 66% were male. The baseline mean (standard deviation) of liver test parameters were as follows: serum bile acid levels 280 (213) $\mu\text{mol/L}$, AST 158 (68) units/L, and ALT 179 (112) units/L. Given the patients' young age, a single-item observer-reported outcome was used to measure patients' pruritus symptoms as observed by their caregiver twice daily (once in the morning and once in the evening) on the Itch Reported Outcome Instrument (ItchRO[Obs]). Pruritus symptoms were assessed on a 5-point ordinal response scale, with scores ranging from 0 (none observed or reported) to 4 (very severe). Patients were only included if their average pruritus score was greater than 2 (moderate) in the 2 weeks prior to baseline. The average of the worst daily ItchRO(Obs) pruritus scores was computed for each week. For randomized patients, the mean (SD) at baseline (pre-treatment) was 3.1 (0.5) and the mean (SD) at Week 18 (pre-randomized withdrawal period) was 1.4 (0.9). On average, patients administered maralixibat for 22 weeks maintained pruritus reduction whereas those in the placebo group who were withdrawn from maralixibat after Week 18 returned to baseline pruritus scores by Week 22. Results from the placebo-controlled period are presented in the Table. After re-entering the open-label treatment phase, both randomized treatment groups had similar mean pruritus scores by Week 28, the first week placebo patients received the full dosage of maralixibat after withdrawal. These observer-rated pruritus results are supported by similar results on patient-rated pruritus in patients 5 years of age and older who were able to self-report their itching severity.

	Maralixibat (n=13)	Placebo (n=16)	Mean Difference
Week 22, Mean (95% CI)	1.6 (1.1, 2.1)	3.0 (2.6, 3.5)	
Change from Week 18 to Week 22, Mean (95% CI)	0.2 (-0.3, 0.7)	1.6 (1.2, 2.1)	-1.4 (-2.1, -0.8)

Maralixibat is the second pharmacologic therapy specifically approved for PFIC. The first being another IBAT inhibitor, odevixibat (Bylvay), in July 2021. Before IBAT inhibitor therapy, treatment relied on supportive pharmacologic therapy for symptomatic relief (e.g., ursodiol, rifampicin, cholestyramine, antihistamines) or surgical intervention (e.g., surgical biliary diversion, liver transplantation). According to the European Association for the Study of the Liver (EASL) guidelines, ursodiol is the first line medication for cholestasis although its effect on pruritus varies. Ursodiol has been reported to improve biochemical tests in almost 50% of patients with PFIC3, but often does not affect PFIC1 and PFIC2. Rifampicin counteracts pruritus by increasing the metabolism of pruritogenic substances, prompting their renal elimination in hydroxylated forms. In addition, the antibacterial effect of rifampicin in the intestine may potentially modify the intestinal metabolism of pruritogenic substances. Because this treatment is well tolerated, and its efficacy has been demonstrated, rifampicin is widely considered a first-line treatment for cholestatic pruritus in children. The anion exchange resin cholestyramine was

initially the only approved medication for cholestatic pruritus; however, its inconsistent efficacy and poor tolerance (nausea, constipation, diarrhea) often limits its use in children.

The efficacy and safety of maralixibat leading to FDA approval for PFIC was assessed in Phase 3 MARCH-PFIC study (NCT03905330, Trial 2 in the product labeling), a 26-week randomized, placebo-controlled trial. Efficacy was evaluated in 64 patients with documented molecular diagnosis of PFIC with presence of biallelic known pathogenic variants. Patients were randomized to receive maralixibat orally 570 mcg/kg (n=33) or placebo (n=31) twice daily. Pruritus symptoms were observed by their caregiver twice daily on the Itch Reported Outcome Instrument [ItchRO(Obs)]. Pruritus symptoms were assessed on a 5-point ordinal response scale, with scores ranging from 0 (none observed) to 4 (very severe). Patients were included in the trial if their average pruritus score was greater or equal to 1.5 in the 4 weeks prior to baseline. Most patients were on stable ursodeoxycholic acid (89.1%) or rifampicin (51.6%) therapy at baseline. The average morning ItchRO(Obs) severity score for each patient was calculated by averaging the morning scores within a week, then averaging 4 weekly morning scores to yield a single 4-week score, and finally averaging the three, 4-week average morning scores (weeks 15 to 18, weeks 19 to 22, weeks 23 to 26). The change from baseline to weeks 15 to 26 of the average morning ItchRO[Obs] was significantly greater in the maralixibat group at -1.8 (95% CI, -2.2 to -1.4;) compared with -0.6 (95% CI, -1 to -0.2) in the placebo group.

POSITION STATEMENT:

Comparative Effectiveness

The FDA has deemed the drug(s) or biological product(s) in this coverage policy to be appropriate for self-administration or administration by a caregiver (i.e., not a healthcare professional). Therefore, coverage (i.e., administration) in a provider-administered setting such as an outpatient hospital, ambulatory surgical suite, physician office, or emergency facility is not considered medically necessary.

Initiation of maralixibat (Livmarli) **meets the definition of medical necessity** when **ALL** of the following criteria are met ("1" to "11"):

1. Member has a confirmed diagnosis of **EITHER** of the following ("a" or "b"):
 - a. Progressive familial intrahepatic cholestasis (PFIC) as evidenced by **BOTH** of the following ("i" and "ii"):
 - i. Genetic testing demonstrating a gene mutation affiliated with progressive familial intrahepatic cholestasis (for example, mutations in *ATP8B1*, *ABCB11*, *ABCB4*, *TJP2*, *NR1H4*, or *Myo5b* genes) – *medical record documentation of the member's genetic testing results must be submitted*
 - ii. A pretreatment (baseline) total serum bile acid concentration above the upper limit of normal (ULN) for the member's age [according to the reporting laboratory] - *medical record documentation of the member's baseline total serum bile acid level must be submitted*
 - b. Alagille syndrome (ALGS) with cholestasis as evidenced by **BOTH** of the following ("i" and "ii"):

- i. Genetic testing demonstrating a mutation in the *JAG1* or *NOTCH2* genes* – *medical record documentation of the member’s genetic testing results must be submitted*

**Very rarely a patient may have ALGS with no identifiable gene mutation. In these cases, the specialist physician must provide medical record documentation detailing how the member’s clinical work-up, signs and symptoms of disease, and differential diagnosis (i.e., exclusion of other causes) has confirmed the member has ALGS.*
 - ii. A pretreatment (baseline) total serum bile acid concentration above the upper limit of normal (ULN) for the member’s age [according to the reporting laboratory] - *medical record documentation of the member’s baseline total serum bile acid level must be submitted*
2. Member does **NOT** have a diagnosis of PFIC2 with ABCB11 variants resulting in non-functional or complete absence of bile salt export pump protein (BSEP-3)
3. Member has a history of moderate-to-severe pruritus due to cholestasis associated with ALGS or PFIC - *medical records documenting the member’s severity of pruritis and scratching must be submitted*
4. Member has **NOT** previously received a liver transplant
5. Member does **NOT** have clinical evidence of decompensated cirrhosis
6. **ANY** of the following regarding ursodiol treatment (“a”, “b”, or “c”):
 - a. Member is currently being treated with ursodiol
 - b. Member has had a previous trial of ursodiol treatment with minimal clinical benefit
 - c. Member had intolerable adverse effects with or has a contraindication to treatment with ursodiol - *the specific intolerance or contraindication must be provided.*
7. Member has tried and had an inadequate response to at least **ONE** other systemic cholestasis pruritus treatment [cholestyramine, naltrexone, rifampin, or sertraline], **OR** the member has intolerances and/or contraindications to **ALL** of these medications – *if applicable the specific intolerances and/or contraindications must be provided*
8. Maralixibat will **NOT** be used in combination with another ileal bile acid transporter (IBAT) inhibitor [for example, odevixibat (Bylvay)]
9. Maralixibat is prescribed by, or in consultation with, a gastroenterologist, hepatologist, or other physician who specializes in the management of ALGS or PFIC
10. Member is at least 3 months of age or older for the treatment of ALGS or 12 months or older for the treatment of PFIC
11. Dosage of maralixibat does not exceed the following based on the diagnosis and use of the oral solution vs. tablets:
 - **ALGS:**
 - Oral solution - 380 mcg/kg body weight once daily (up to a maximum of 28.5 mg (3 mL) of the 9.5 mg/mL oral solution per day) [maximum of three 30 mL bottles of the 9.5 mg/mL oral solution per 30 days]
 - Tablets - 380 mcg/kg body weight once daily

- Less than 25 kg (55 lbs) – must use the oral solution
- 25 to <33 kg (55 to <73 lbs) – 10 mg daily
- 33 to <44 kg (73 to <97 lbs) – 15 mg daily
- 44 to <66 kg (146 lbs) – 20 mg daily
- 66 kg (146 lbs) or greater – 30 mg daily
- PFIC:
 - Oral solution - 570 mcg/kg body weight twice daily (up to a maximum of 38 mg (4 mL) of the 19 mg/mL oral solution per day) [maximum of two 30 mL bottles of the 19 mg/mL oral solution per 30 days]
 - Tablets - 570 mcg/kg body weight twice daily
 - Less than 25 kg (55 lbs) – must use the oral solution
 - 25 to <33 kg (55 to <73 lbs) – 15 mg twice daily
 - 33 (73 lbs) or greater – 20 mg twice daily

Approval duration: 6 months

Continuation of maralixibat (Livmarli) **meets the definition of medical necessity** when **ALL** of the following criteria are met (“1” to “7”):

1. An authorization or reauthorization for maralixibat oral solution or tablets has been previously approved by Florida Blue or another health plan in the past 2 years for the treatment of ALGS or PFIC (if another health plan, documentation of a health plan-paid claim for maralixibat during the 90 days immediately before the authorization request must be submitted); **OR** the member has previously met **ALL** indication-specific criteria
2. Member has had a beneficial response to therapy as determined by a clinically meaningful reduction in pruritis – *medical record documentation citing the impact of treatment on the member’s pruritis must be submitted*
3. Member has **NOT** received a liver transplant
4. Member does **NOT** have clinical evidence of decompensated cirrhosis
5. Maralixibat will **NOT** be used in combination with another ileal bile acid transporter (IBAT) inhibitor [for example, odevixibat (Bylvay)]
6. Maralixibat is prescribed by, or in consultation with, a gastroenterologist, hepatologist, or other physician who specializes in the management of ALGS or PFIC
7. Dosage of maralixibat does not exceed the following based on the diagnosis and use of the oral solution vs. tablets:
 - ALGS:
 - Oral solution - 380 mcg/kg body weight once daily (up to a maximum of 28.5 mg (3 mL) per day of the 9.5 mg/mL oral solution) [maximum of three 30 mL bottles of the 9.5 mg/mL oral solution per 30 days]
 - Tablets - 380 mcg/kg body weight once daily
 - Less than 25 kg (55 lbs) – must use the oral solution

- 25 to <33 kg (55 to <73 lbs) – 10 mg daily
- 33 to <44 kg (73 to <97 lbs) – 15 mg daily
- 44 to <66 kg (146 lbs) – 20 mg daily
- 66 kg (146 lbs) or greater – 30 mg daily
- PFIC:
 - Oral solution - 570 mcg/kg body weight twice daily (up to a maximum of 38 mg (2 mL) per day of the 19 mg/mL oral solution) [maximum of two 30 mL bottles of the 19 mg/mL oral solution per 30 days]
 - Tablets - 570 mcg/kg body weight twice daily
 - Less than 25 kg (55 lbs) – must use the oral solution
 - 25 to <33 kg (55 to <73 lbs) – 15 mg twice daily
 - 33 (73 lbs) or greater – 20 mg twice daily

Approval duration: 1 year

DOSAGE/ADMINISTRATION:

THIS INFORMATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE USED AS A SOURCE FOR MAKING PRESCRIBING OR OTHER MEDICAL DETERMINATIONS. PROVIDERS SHOULD REFER TO THE MANUFACTURER'S FULL PRESCRIBING INFORMATION FOR DOSAGE GUIDELINES AND OTHER INFORMATION RELATED TO THIS MEDICATION BEFORE MAKING ANY CLINICAL DECISIONS REGARDING ITS USAGE.

FDA-approved

- Indicated for the treatment of cholestatic pruritus in patients with Alagille syndrome (ALGS) 3 months of age and older
 - Use the 9.5 mg/mL oral solution or tablets. The recommended dosage is 380 mcg/kg once daily, taken 30 minutes before the first meal of the day. Start dosing at 190 mcg/kg administered orally once daily; after one week, increase to 380 mcg/kg once daily, as tolerated. The maximum daily dose volume for patients above 70 kg is 3 mL or 28.5 mg per day. Refer to the product labeling Table 1: 9.5 mg/mL Livmarli Oral Solution for Patients with ALGS: Volume per Dose (mL) by Weight when using the oral solution, or Table 2: Livmarli Tablets for Patients with ALGS: Dosage by Weight when using the tablets. The oral solution is required for the first week of treatment for patients under 44 kg (97 lbs).
- Indicated for the treatment of cholestatic pruritus in patients 12 months of age and older with progressive familial intrahepatic cholestasis (PFIC). Limitations of Use: Livmarli is not recommended in a subgroup of PFIC type 2 patients with specific ABCB11 variants resulting in non-functional or complete absence of bile salt export pump (BSEP) protein.
 - Use the 19 mg/mL oral solution or tablets. The recommended dosage is 570 mcg/kg twice daily 30 minutes before a meal. The starting dose is 285 mcg/kg orally once daily in the morning and should be increased to 285 mcg/kg twice daily, 428 mcg/kg twice daily, and then to 570 mcg/kg twice daily, as tolerated. The maximum daily dose should not exceed 38 mg (2 mL) per day. Refer to the product labeling Table 3: 19 mg/mL Livmarli Oral Solution for Patients with PFIC: Volume per Dose (mL) by Weight when using the oral solution, or Table 4: Livmarli Tablets for

Patients with PFIC: Dosage by Weight when using the tablets. The oral solution is required for the 285 mcg/kg and 428 mcg/kg twice daily dosage in patients under 33 kg (73 lbs).

- The two strengths of 9.5 mg/mL and 19 mg/mL should NOT be substituted for one another when treating PFIC patients. Special attention should be given to the accurate calculation of the dose volume of Livmarli. This is especially important for pediatric patients less than 5 years old as Livmarli oral solution contains the excipient propylene glycol (364.5 mg/mL).
- Livmarli tablets can be used for treatment of both ALGS and PFIC in patients weighing 25 kg (55 lbs) and above who can swallow tablets. Select the oral solution or tablets based on the patient's weight and ability to swallow tablets.

Dose Adjustments

- **Hepatic Impairment:** Reduce the dose or interrupt treatment if new onset liver test abnormalities occur. Once the liver test abnormalities return back to baseline or stabilizes at a new baseline value, consider restarting maralixibat at the last tolerated dose and increase the dose as tolerated. . Consider permanent discontinuation if abnormalities in liver tests recur or symptoms consistent with clinical hepatitis are observed. Livmarli has not been studied in patients with hepatic decompensation. Permanently discontinue treatment if a patient experiences a hepatic decompensation event (e.g., variceal hemorrhage, ascites, hepatic encephalopathy).
- **Renal Impairment:** Specific guidelines for dosage adjustments in renal impairment are not available; it appears that no dosage adjustments are needed.

Drug Availability

- Oral solution:
 - For treatment of ALGS - 9.5 mg/mL oral solution in a 30 mL amber plastic bottle [285 mg per bottle]
 - For treatment of PFIC - 19 mg/mL oral solution in a 30 mL amber plastic bottle [570 mg per bottle]
 - Store unopened between 20°C and 25°C (68°F and 77°F), excursion permitted between 15°C and 30°C (59°F and 86°F). After opening the bottle, store below 30°C (86°F) and discard any remaining maralixibat 100 days after first opening of bottle.
- Tablets
 - 10, 15, 20, and 30 mg

PRECAUTIONS:

Boxed Warning

- None

Contraindications

- Prior or active hepatic decompensation events (e.g., variceal hemorrhage, ascites, hepatic encephalopathy)

Precautions/Warnings

- **Hepatotoxicity:** Obtain baseline liver tests and monitor patients frequently for the first 6 to 8 months after starting therapy, and as clinically indicated thereafter during treatment. If liver test abnormalities or signs of clinical hepatitis occur, consider dose reduction or treatment interruption. For persistent or recurrent liver test abnormalities relative to baseline, discontinuation Livmarli. Monitor patients with compensated cirrhosis frequently. Permanently discontinue Livmarli if hepatic decompensation event occurs.
- **Gastrointestinal Adverse Reactions:** Consider reducing the dosage or interrupting treatment if a patient experiences persistent diarrhea, abdominal pain, vomiting, or has diarrhea with bloody stool, vomiting, dehydration requiring treatment, or fever. If diarrhea, abdominal pain, or vomiting persists and no alternate etiology is identified, consider stopping treatment.
- **Fat-Soluble Vitamin (FSV) Deficiency:** Obtain baseline levels and monitor during treatment. Supplement if deficiency is observed. If FSV deficiency persists or worsens despite FSV supplementation, consider discontinuing treatment.
- **Bile Acid Binding Resins:** Bile acid binding resins may bind maralixibat in the gut, which may reduce efficacy. Administer bile acid binding resins (e.g., cholestyramine, colesevelam, or colestipol) at least 4 hours before or 4 hours after administration of maralixibat.
 - Fracture: Consider interrupting treatment and supplement with FSV. Livmarli can be restarted once FSV deficiency is corrected and maintained at corrected levels.
 - Bleeding: Interrupt treatment. Treatment can be restarted if the FSV deficiency is corrected, and bleeding has resolved.
- **Risk of Propylene Glycol Toxicity (Pediatric Patients Less Than 5 years of Age):** Total daily intake of propylene glycol should be considered for managing the risk of propylene glycol toxicity. Monitor patients for signs of propylene glycol toxicity. Discontinue if toxicity is suspected.

BILLING/CODING INFORMATION:

HCPCS Coding

J8499	Prescription drug, oral, non chemotherapeutic, nos
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ICD-10 Diagnosis Codes That Support Medical Necessity

E78.7	Disorder of bile acid and cholesterol metabolism, unspecified
K76.8	Other specified diseases of liver
L29.81	Cholestatic pruritus
Q44.71	Alagille syndrome
Q44.79	Other congenital malformations of liver

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Part D: Florida Blue has delegated to Prime Therapeutics authority to make coverage determinations for the Medicare Part D services referenced in this guideline.

Medicare Advantage: No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline review date.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at [Coverage Protocol Exemption Request](#)

DEFINITIONS:

None

RELATED GUIDELINES:

[Odevixibat \(Bylvay\) Capsule, 09-J4000-09](#)

OTHER:

None

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Pharmacy Policy Committee on 09/11/24.

GUIDELINE UPDATE INFORMATION:

01/01/22	New Medical Coverage Guideline.
10/15/22	Review and revision to guidelines consisting of updates to the Position Statement.
05/15/23	Revision to guidelines consisting of updates to the description, position statement, dosage/administration, and referenced based on the expanded approval to include patients aged 3 months to 12 months.
10/01/23	Revision: Added ICD-10 code Q44.71 and deleted code Q44.7.
10/15/23	Review and revision to guidelines consisting of updates to the description and references.
06/15/234	Revision to guidelines consisting of updates to the description, position statement, dosage/administration, precautions, billing/coding, and references based on the new FDA-approved indication for PFIC.
09/15/24	Revision to guidelines consisting of updates to the description, position statement, dosage/administration, precautions, and references based on the expanded FDA-approved age for PFIC and new 19 mg/mL oral solution concentration.
10/15/24	Review and revision to guidelines consisting of updates to the description, position statement, billing/coding, and references.
06/15/25	Revision to guidelines consisting of updates to the description, position statement, dosage/administration, and references based on the release of an oral tablet formulation.