

DISCOVER
 **Livmarli**[®]
(maralixibat) oral solution or tablets

Navigating a progressive familial intrahepatic cholestasis (PFIC) diagnosis can be hard. Finding ways to manage the condition can be even harder.

This brochure will discuss an FDA-approved medication that targets one of the underlying causes of liver-related problems in PFIC.

Explore real patient stories



Meet Tyler



Meet Matt Jr



Meet Stuart

Meet Tyler and Matt Jr on [page 16](#) and Stuart on [page 17](#):
3 people who take LIVMARLI to help treat cholestatic pruritus in PFIC.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of LIVMARLI (maralixibat) oral solution and tablets?

- **Liver injury.** These changes may be a sign of liver injury and can be serious or may lead to liver transplant or death. Your health care provider should do blood tests and physical exams before starting and during treatment with LIVMARLI to check your liver function. Tell your health care provider right away if you get any signs or symptoms of liver problems, including:
 - nausea or vomiting
 - your skin or the white part of your eye turns yellow
 - dark or brown urine
 - pain on the right side of your stomach (abdomen)
 - fullness, bloating, or fluid in your stomach area (ascites)
 - loss of appetite
 - bleeding or bruising more easily than normal, including vomiting blood

Please see additional Important Safety Information for LIVMARLI throughout and full Prescribing Information, including Patient Information and Instructions for Use.

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What is PFIC?

Progressive familial intrahepatic cholestasis (PFIC) is a group of rare, inherited diseases that mostly affects the liver.

—Getting to know PFIC subtypes—

The most common types of PFIC are:

PFIC1

FIC1 deficiency

PFIC2

BSEP deficiency

PFIC3

MDR3 deficiency

Milder forms of **PFIC1** and **PFIC2** are known as benign recurrent intrahepatic cholestasis, or **BRIC1** and **BRIC2**. In total, however, **13 different types have been identified**.

Researchers expect to discover more types as studies continue.

Common Types

Affected Gene	Protein Deficiency (PFIC Type)	Estimated Level of Cholestatic Pruritus (itch)	Other Possible Symptoms
<i>ATP8B1</i>	FIC1 (PFIC1)	Severe	Jaundice, diarrhea, trouble growing, vitamin deficiencies, hearing loss
<i>ABCB11</i>	BSEP (PFIC2)	Very Severe	Jaundice, dark urine, enlarged liver, trouble growing, scarring of the liver
<i>ABCB4</i>	MDR3 (PFIC3)	Moderate	Jaundice, fever, enlarged liver and spleen, diarrhea, reduced bone density, trouble growing

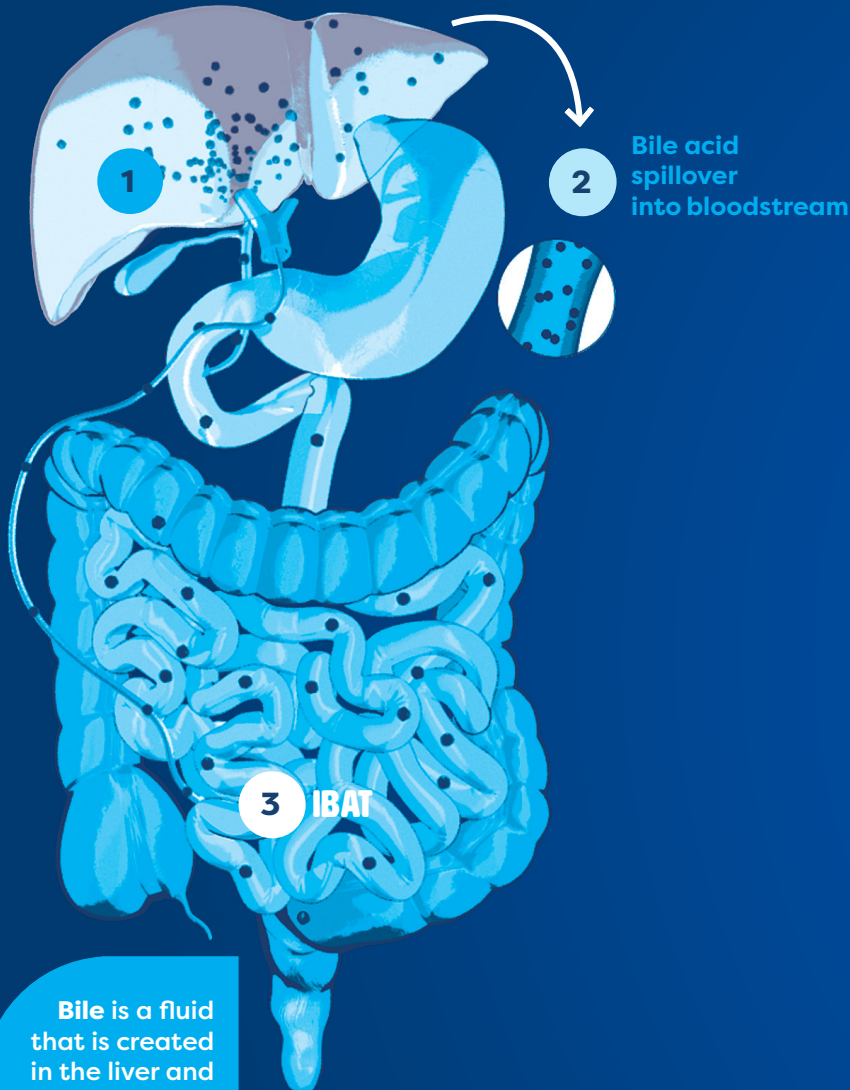
Rare Types

Affected Gene	Protein Deficiency (PFIC Type)	Estimated Level of Cholestatic Pruritus	Other Possible Symptoms
<i>TJP2</i>	ZO-2 (PFIC4)	Severe	Jaundice, enlarged liver, sometimes bleeding problems or breathing issues
<i>NR1H4</i>	FXR (PFIC5)	Unknown	Very early liver problems in infants, bleeding issues
<i>SLC51A</i>	OST α -OST β (PFIC6)	Severe	Jaundice, diarrhea, trouble absorbing nutrients, vitamin deficiencies, bruising or bleeding issues



The liver and cholestatic pruritus (itch)

How does progressive familial intrahepatic cholestasis (PFIC) affect the liver?



Bile is a fluid that is created in the liver and then released into the intestines.

1 In PFIC, **bile acids**—a part of bile—get stuck inside the liver cells, which **prevents bile from properly flowing out of the liver.**

2 When bile is not properly flowing out of the liver, **bile acids build up in the liver and the blood.**

3 95% of bile acids made by the liver are **recycled in the intestine through the ileal bile acid transporter (IBAT)** and go back to the liver.

The journey to diagnosis can be hard



Though PFIC typically appears in infancy or early childhood, with some types, like PFIC3, symptoms may not present until adulthood. PFIC can also be missed in adults, and symptoms like cholestatic pruritus are often normalized or overlooked, adding to diagnosis challenges.

PFIC symptoms can be subtle, so it may be worthwhile to undergo genetic testing if you have a family member with PFIC. Talk with your doctor about whether genetic testing might be helpful for you or your loved one.



How does PFIC lead to cholestatic pruritus (itch)?

When bile acids build up in the liver, they spill over into the bloodstream. This can cause an increase in bile acids throughout the entire body.

These **high levels of bile acids** are an underlying cause of cholestatic pruritus in progressive familial intrahepatic cholestasis (PFIC).

Cholestatic pruritus affects

UP TO 100%

of people with PFIC and is also the most burdensome symptom

Over time, the buildup of bile acids can lead to long-term problems, including:

Inflammation
in the liver



Liver damage
that worsens
over time



Scar tissue
in the liver



Risk of
transplant



More options to treat cholestatic pruritus

Treatment options for cholestatic pruritus in PFIC have been limited. In cases where cholestatic pruritus is unmanageable, many people still choose to have surgery and/or a liver transplant.



92%

In a study of 38 pediatric patients with PFIC who underwent surgery, **92% were motivated by cholestatic pruritus.***

In another study, end-stage liver disease was the most common reason for liver transplant in pediatric patients with PFIC. **Persistent cholestatic pruritus was the second most common reason.**

*A retrospective (looking back in time) evaluation of surgery that did not include a liver transplant for pediatric cholestasis in 58 patients, including 38 patients with PFIC. Among these 38 patients, the reasons for surgery included pruritus in 92% (35/38 patients), followed by progression of liver disease in 59%.



Impact of cholestatic pruritus (itch)

Cholestatic pruritus is often a very challenging symptom for people with progressive familial intrahepatic cholestasis (PFIC) beyond the scratching.

Cholestatic pruritus can affect a person's emotional, mental, and physical well-being. Signs and symptoms related to the itch can look different during the day and/or night, vary among patients, or even change with age.



- » Approximately 60% of caregivers reported that their child suffered from sleep disturbances due to itch*
- » Sleep disturbances include needing help falling asleep, needing soothing, and sleeping with a caregiver

Additional signs and symptoms related to cholestatic pruritus can include:



Skin damage



Worsened physical function



Worsened performance in school



Worsened general health



Potential negative impact on social activities



Cognitive impact (information processing, poor attention)



Irritability



Burning, tingling, or prickling sensation

*A qualitative assessment of patient-/observer-reported outcomes by study participant caregivers (N=62) examined pruritus and sleep disturbances during a 5- to 8-week screening period of a Phase 3 study in patients with PFIC.



How does LIVMARLI work to reduce cholestatic pruritus (itch) in the body?

1

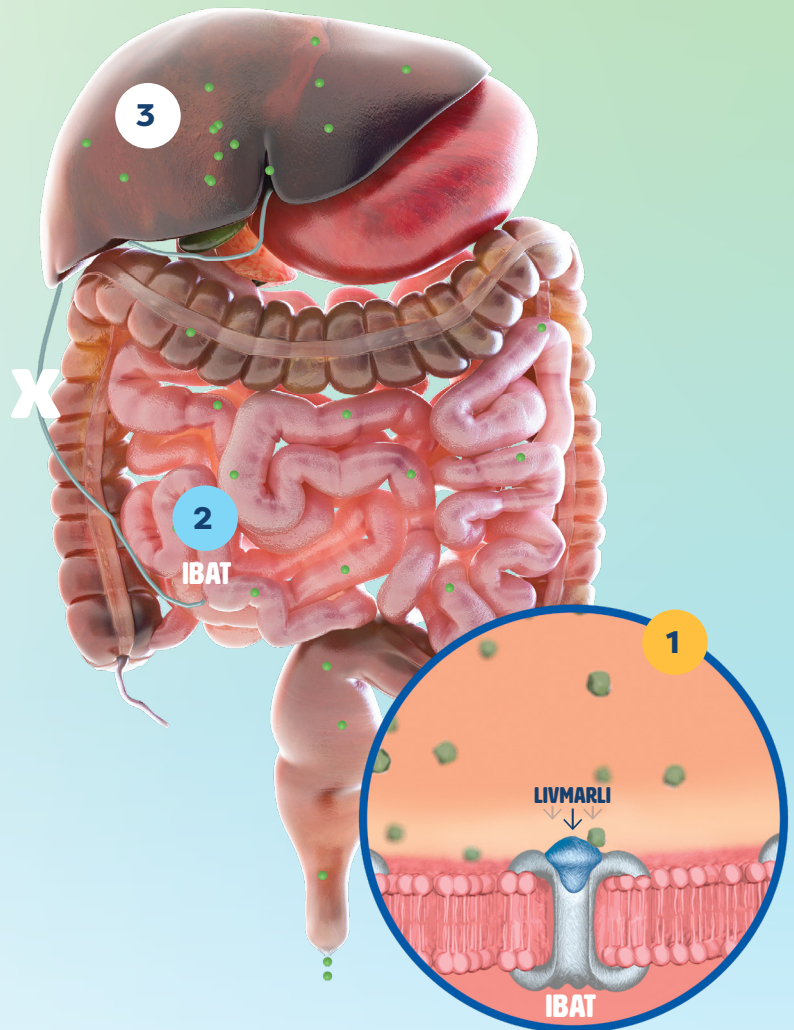
LIVMARLI targets and temporarily blocks something called the ileal bile acid transporter (IBAT). In doing so, LIVMARLI lowers bile acids in the body (as measured by levels in the blood).

2

LIVMARLI blocks bile acids from going back into the liver and increases the amount of bile acids removed from the body in feces.

3

In the clinical study for LIVMARLI, reductions in bile acid buildup were associated with decreases in intensity of cholestatic pruritus.



The way LIVMARLI improves cholestatic pruritus is not completely known. It may involve inhibition of the IBAT, which interrupts bile acid recycling to the liver and decreases serum bile acids.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of LIVMARLI (maralixibat) oral solution and tablets?

- **Stomach and intestinal (gastrointestinal) problems.** LIVMARLI can cause stomach and intestinal problems, including diarrhea and stomach pain during treatment. Diarrhea can also cause the loss of too much body fluid (severe dehydration). Your health care provider may advise you to monitor for new or worsening stomach problems, including stomach pain, diarrhea, blood in your stool, or vomiting

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Early improvements with long-term impact

The **ONLY** IBAT inhibitor with data in the **broadest range of PFIC subtypes**

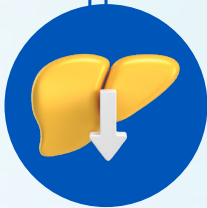
In a 6-month clinical study called MARCH-PFIC, 93 patients with progressive familial intrahepatic cholestasis (PFIC) were treated with either LIVMARLI or placebo* to find out if it **helped reduce levels of cholestatic pruritus (itch) and bile acids in the blood** (known as serum bile acids, or SBAs). After 6 months, patients had the option to enter a long-term follow-up study (called MARCH-ON).



Early improvements
Improvements in cholestatic pruritus were seen as early as 2 weeks after starting LIVMARLI.



Relief that lasts
Relief from cholestatic pruritus lasted through 2 years for those who stayed on LIVMARLI in the long-term study.



Reduction in sBA levels
About 5 in 10 patients had their sBA levels reduced by at least 75%.[†]



IBAT=ileal bile acid transporter.

*The MARCH-PFIC study was a multicenter, double-blind study, meaning the study was run in many locations and patients and doctors were not aware which patients received LIVMARLI and which received placebo. After 26 weeks, for patients who chose to remain on treatment, all patients took only LIVMARLI. Placebo looked and tasted like a “real” treatment, but did not have any active medicine.

[†]Compared with less than 1 in 10 people (7%) who received placebo.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of LIVMARLI (maralixibat) oral solution and tablets?

- **Stomach and intestinal (gastrointestinal) problems.** Tell your health care provider right away if you have any new or worsening signs or symptoms of stomach and intestinal problems, including:
 - diarrhea
 - vomiting
 - more frequent bowel movements than usual
 - urinating less often than usual
 - stools that are black, tarry, or sticky, or have blood or mucous
 - dizziness
 - severe stomach-area pain or tenderness
 - headache

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How cholestatic pruritus (itch) was assessed

Patients were included in the MARCH-PFIC study if they were between 1 and 18 years old, diagnosed with progressive familial intrahepatic cholestasis (PFIC), had cholestatic pruritus lasting at least 6 months, and an average morning cholestatic pruritus severity score of ≥ 1.5 as measured by the Itch Reported Outcome (Observer) (ItchRO[Obs]) tool.

The study assessed changes in:

- Cholestatic pruritus
- Serum bile acids (sBAs; refers to the level of bile acid in a person's blood; high levels are associated with cholestatic pruritus and liver damage)
- Growth (height and weight)
- Bilirubin levels
- Liver enzymes (ALT and AST)

Patients in the study were split into multiple cohorts, or groups:

PFIC2 Group

Only included patients with PFIC2

14 patients received LIVMARLI;
17 patients received placebo

All-PFIC Group

Included patients with PFIC2 as well as patients with PFIC1, PFIC3, PFIC4, or PFIC6

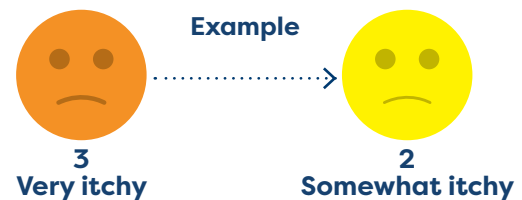
33 patients received LIVMARLI;
31 patients received placebo

Other patients with less common or more variable forms of PFIC were also studied.

The ItchRO tool

In the clinical study, patients kept an ongoing log of their cholestatic pruritus using the Itch Reported Outcome (ItchRO) tool. **This tool was used to measure cholestatic pruritus severity over time based on a 5-point scale.**

Changes in ItchRO score by 1 point or more represent noticeable differences in the itch; for example, a change from 3 to 2 means that a patient went from feeling very itchy to feeling somewhat itchy.



ALT=alanine aminotransferase; AST=aspartate aminotransferase.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of LIVMARLI (maralixibat) oral solution and tablets?

- A condition called **Fat-Soluble Vitamin (FSV) Deficiency caused by low levels of certain vitamins (vitamin A, D, E, and K) stored in body fat.** FSV deficiency is common in patients with PFIC but may worsen during treatment. Your health care provider should do blood tests before starting and during treatment, and may monitor for bone fractures and bleeding, which are common side effects

Please see additional Important Safety Information for LIVMARLI throughout and full Prescribing Information, including Patient Information and Instructions for Use.



Early and lasting relief across all PFIC subtypes

Improvements in cholestatic pruritus (itch) were seen as early as 2 weeks and continued throughout treatment with LIVMARLI in both the PFIC2 group and the All-PFIC group.

PFIC2 Group

During the first 6 months of treatment, patients taking LIVMARLI in the PFIC2 group saw **significant improvements in cholestatic pruritus** (average 1.7-point reduction in ItchRO score) compared with those who took placebo (average less than 0.6-point reduction in ItchRO score).

All-PFIC Group



~6 in 10 patients experienced noticeably less itch
Patients with PFIC experienced noticeably less cholestatic pruritus within 6 months of starting treatment with LIVMARLI.*



~6 in 10 patients experienced more days with little-to-no itch
Patients treated with LIVMARLI had significantly more days with little or no cholestatic pruritus (had an ItchRO score of 0 or 1).*



Half of the patients in the All-PFIC group who took LIVMARLI had a:
75% reduction in sBA levels
or achieved sBA levels less than 102 $\mu\text{mol/L}$ [†]

Lasting Results

Those who stayed on LIVMARLI in the long-term study felt **relief from cholestatic pruritus through 2 years.**



ItchRO=Itch Reported Outcome; PFIC=progressive familial intrahepatic cholestasis; sBA=serum bile acid.

*Compared with around 3 in 10 patients with PFIC who received placebo.

[†]Compared with 7% of patients who received placebo.

IMPORTANT SAFETY INFORMATION (cont'd)

Tell your health care provider about all medicines that you take, as LIVMARLI may interact with other medicines. If you take a medicine that lowers cholesterol by binding bile acids, such as cholestyramine, colestevlam, or colestipol, take LIVMARLI at least 4 hours before or 4 hours after you take that medicine. Your health care provider may change your dose, or temporarily or permanently stop treatment with LIVMARLI if you have certain side effects.

Please see additional Important Safety Information for LIVMARLI throughout and full Prescribing Information, including Patient Information and Instructions for Use.



What study data tell us about additional benefits over time

Studies also looked at whether reducing cholestatic pruritus (itch) with LIVMARLI led to other improvements beyond the itch. What they found was that patients whose cholestatic pruritus improved with LIVMARLI also saw improvements in the level of bilirubin in their blood, as well as improvements in their growth.

The importance of bilirubin



Bilirubin is a part of bile that forms when your body breaks down red blood cells. If bile is not flowing properly, bilirubin can build up in the blood.



Doctors can check bilirubin levels to detect, monitor, and understand the severity of liver injury or disease.

Bilirubin levels over time



Those who saw improvements in cholestatic pruritus with LIVMARLI also had more than twice the reduction in bilirubin compared with those who did not, on average.



Among patients who saw improvements in itch with LIVMARLI, **all who started with normal total bilirubin levels kept those levels normal after 26 weeks.** In comparison, half of the patients who did not have improvements in itch saw their bilirubin stay within normal levels.*†

About half of patients who saw improvements in itch with LIVMARLI also saw their high total bilirubin levels return to normal after 26 weeks. Among patients who did not see improvements in itch, only 5% had normal total bilirubin levels after 26 weeks.*†

*Based on average total bilirubin value at Weeks 18, 22, and 26.

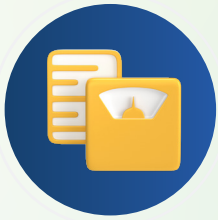
†Normal bilirubin defined as ≤ 1.2 mg/dL and high bilirubin defined as > 1.2 mg/dL as measured by a blood test.

IMPORTANT SAFETY INFORMATION (cont'd)

LIVMARLI is available in oral solution and tablet formulations. Take LIVMARLI exactly as your health care provider tells you to and do not change your dose unless you are instructed to. In patients with PFIC, LIVMARLI is taken by mouth, 2 times each day, 30 minutes before a meal. For the oral solution, be sure to use the provided oral dosing dispenser to accurately measure the dose of medicine.

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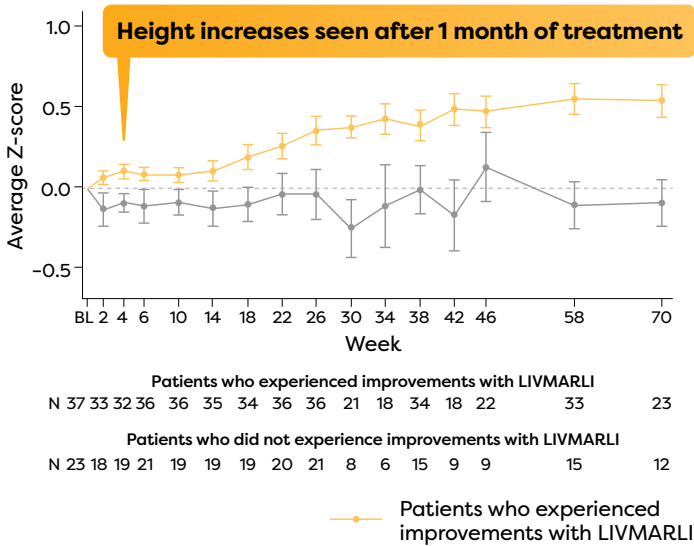


How LIVMARLI affected height and weight

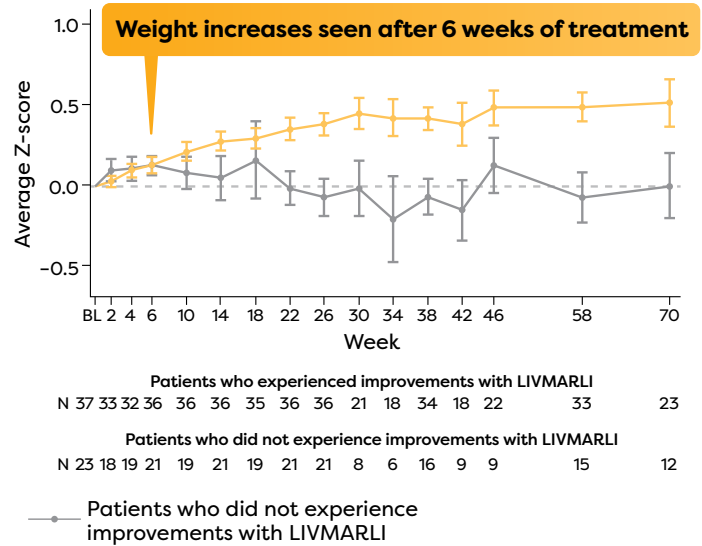
Results from MARCH-PFIC and MARCH-ON showed that patients who experienced improvements in cholestatic pruritus (itch) were also more likely to grow in height and gain weight over time. Height and weight were measured as a Z-score, which shows how someone compares with the average for their age and sex.

Changes in growth (height and weight)

Change in height from start of study*



Change in weight from start of study*



*Changes reported from the All-PFIC group.

Patients with PFIC who felt cholestatic pruritus relief with LIVMARLI started growing taller in just 1 month and gaining weight in 6 weeks. Improvements in height and weight continued for more than a year.

PFIC=progressive familial intrahepatic cholestasis.

IMPORTANT SAFETY INFORMATION (cont'd)

These are not all of the possible side effects of LIVMARLI. For more information, ask your health care provider or pharmacist. Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

Please see additional Important Safety Information for LIVMARLI throughout and full Prescribing Information, including Patient Information and Instructions for Use.



What are the possible side effects of LIVMARLI?

Side effects can happen as your body is adjusting to LIVMARLI and working to get rid of excess bile. Talk with your doctor about what to expect and how to manage any side effects.

The most common* side effects in clinical studies included:

- » Diarrhea (around 6 in 10 people)
- » Stomach pain (around 3 in 10 people)
- » Fat-soluble vitamin (FSV) deficiency (around 3 in 10 people)
- » Liver test abnormalities (around 2 in 10 people)
- » Rectal bleeding (around 1 in 10 people)
- » Bone fractures (around 1 in 10 people)

About gastrointestinal (GI) side effects

- » GI events like diarrhea and stomach pain may occur as your body adjusts to LIVMARLI. In clinical studies, **most GI side effects were mild to moderate and temporary, lasting 5.5 days, on average**

About FSV deficiency

- » Though LIVMARLI may affect absorption of FSVs, **patients with progressive familial intrahepatic cholestasis (PFIC) can have FSV deficiency at the start of treatment** and are often supplemented with FSVs
- » In clinical studies, FSV deficiency was more common with placebo than with LIVMARLI (35% vs 28%, respectively) after 26 weeks of treatment
- » Because PFIC can affect vitamin absorption, bone weakness and fractures may occur

About liver test abnormalities

- » High levels of certain liver enzymes called alanine aminotransferase (ALT) and aspartate aminotransferase (AST) can be a sign of liver injury. Your doctor should monitor liver tests during treatment with LIVMARLI

Many side effects may improve with proper management

- » Your doctor may adjust your dose, pause treatment briefly, or suggest supportive steps (like diet changes, fluids, or over-the-counter medicines) to ease GI symptoms
- » **Share your concerns.** Whether they are about side effects, routine challenges, or cost—your care team can help

*“Common” defined as occurring in ≥5% of patients treated with LIVMARLI.



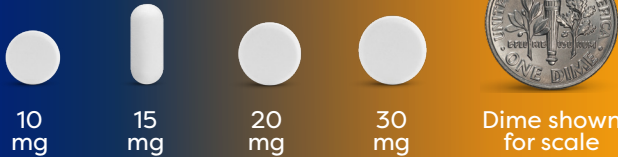
Two convenient options. One small dose twice daily.

LIVMARLI is the **ONLY** ileal bile acid transporter (IBAT) inhibitor available as a tablet or a liquid (oral solution) medicine.

Both LIVMARLI tablets and liquid medicine are taken by mouth.

Tablet **or** Liquid

Available in **4** fixed doses



Tablets and dime actual size.



1 mL is the largest dose—about **1/5** of a teaspoon

Bottle and syringe not actual size.

ONE DOSE, TWICE PER DAY

Both LIVMARLI tablets and liquid medicine should be taken twice daily at the dosage prescribed by your doctor. Take LIVMARLI 30 minutes before a meal.

Dosing for LIVMARLI is based on weight.
Never change the amount of LIVMARLI without first talking to your doctor.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of LIVMARLI (maralixibat) oral solution and tablets?

LIVMARLI can cause serious side effects, including:

- **Liver injury.** Changes in certain liver tests are common in patients with PFIC but may worsen during treatment. These changes may be a sign of liver injury and can be serious or may lead to liver transplant or death. Your health care provider should do blood tests and physical exams before starting and during treatment with LIVMARLI to check your liver function. Tell your health care provider right away if you get any signs or symptoms of liver problems, including:
 - nausea or vomiting
 - your skin or the white part of your eye turns yellow
 - dark or brown urine
 - pain on the right side of your stomach (abdomen)
 - fullness, bloating, or fluid in your stomach area (ascites)
 - loss of appetite
 - bleeding or bruising more easily than normal, including vomiting blood





21-year-old real person with PFIC taking LIVMARLI, who hopes to be a sportscaster one day. Individual results may vary.

Meet Tyler

Tyler was diagnosed with progressive familial intrahepatic cholestasis (PFIC) at 6 months old. His cholestatic pruritus (itch) caused constant active scratching, making Tyler fussy and irritable. It also caused significant sleep disturbances and negatively impacted his social life.

Within 2 weeks of starting LIVMARLI at 10 years old, Tyler experienced improvements in itch. He also felt less need to scratch, less irritable, and more present with friends.

Tyler did not report any side effects with his LIVMARLI treatment.

“After starting LIVMARLI, I wasn’t waking up as much at night to scratch, and I felt less need to stop to itch when playing outside with my friends.”



4-year-old real person with PFIC taking LIVMARLI, whose smile can light up a room. Individual results may vary.

Meet Matt Jr

Matt Jr started itching when he was about 6 months old, but was misdiagnosed with eczema. His cholestatic pruritus caused constant scratching, even bleeding. It was so bad, Matt Jr once scratched his ear so much that he burst his eardrum.

After being diagnosed with PFIC, Matt Jr started LIVMARLI and saw itch improvements within 6 months. He seemed to have more energy, a bigger appetite, and more fun at school.

No side effects were reported with Matt Jr’s LIVMARLI treatment.

“Before LIVMARLI, we felt like we had nowhere else to turn, but Matt Jr is doing much better now.”

*—Matt Sr,
Matt Jr’s dad*

IMPORTANT SAFETY INFORMATION (cont’d)

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61-year-old real person with PFIC taking LIVMARLI, who loves his wife of 35 years and 3 kids.
Individual results may vary.

Meet Stuart

Stuart was initially diagnosed back in the 80s when he experienced a sudden decline in health and relentless itching. Every few years, his cholestatic pruritus (itch) would flare up and only worsened over time, to the point of using a hairbrush on his skin to find relief.

"There was a massive improvement taking LIVMARLI, and today for me, it has relieved the itch related to my PFIC."

Within 5 months of starting LIVMARLI, Stuart experienced significantly less itching and didn't have to "tough it out" at work anymore.

Stuart did not report any side effects with his LIVMARLI treatment.



Get connected.

The PFIC Network is a nonprofit organization that strives to improve the lives of patients and families affected by PFIC worldwide. They value and provide connection, education, and support to the PFIC community. You're not alone in this journey.

To learn more, visit the PFIC Network at pfic.org

PFIC=progressive familial intrahepatic cholestasis.

IMPORTANT SAFETY INFORMATION (cont'd)

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 - urinating less often than usual
 - stools that are black, tarry, or sticky, or have blood or mucous
 - dizziness
 - severe stomach-area pain or tenderness
 - headache

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Getting started is as easy as L-I-V



Let your doctor know about any signs or symptoms of cholestatic pruritus (itch).

If LIVMARLI® (maralixibat) oral solution or tablets is a good fit, your doctor may write a prescription



Incoming call: After your doctor has prescribed LIVMARLI, you'll receive a call from a Patient Navigator at Mirum Access Plus at **1-855-676-4968** who will:

- Assist with insurance coverage
- Discuss support and services Mirum Access Plus can provide—every step of the way



Victory! LIVMARLI will be shipped directly to your door. Your Mirum Access Plus team is there for refills, resources, and support

Do you have questions about Mirum Access Plus?

Visit [LIVMARLI.com](https://www.livmarli.com) or contact us at 1-855-MRM-4YOU (1-855-676-4968). We are available Monday to Friday, from 8:00_{AM} to 8:00_{PM} ET.





Mirum Access Plus is a program that will support you by helping you navigate every step of the way. Mirum Access Plus experts will help you:

- **Understand** the process of getting your medication
- **Figure out** insurance coverage and eligibility for financial support programs
- **Connect you** with education and resources that can help you start and stay on LIVMARLI

Mirum Access Plus works closely with your doctor and insurance plan to help you access LIVMARLI® (maralixibat).

[Click here to explore all that Mirum Access Plus has to offer](#)

INDICATION

LIVMARLI (maralixibat) oral solution and tablets are a prescription medicine used to treat cholestatic pruritus (itch) in patients 12 months of age and older with progressive familial intrahepatic cholestasis (PFIC).

LIVMARLI is not for use in PFIC type 2 patients who have a severe defect in the bile salt export pump (BSEP) protein.

It is not known if LIVMARLI is safe and effective in children with PFIC who are under 12 months of age. It is not known if LIVMARLI is safe and effective in adults who are 65 years of age and older.

IMPORTANT SAFETY INFORMATION

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 - loss of appetite
 - bleeding or bruising more easily than normal, including vomiting blood
- **Stomach and intestinal (gastrointestinal) problems.** LIVMARLI can cause stomach and intestinal problems, including diarrhea and stomach pain during treatment. Diarrhea can also cause the loss of too much body fluid (severe dehydration). Your health care provider may advise you to monitor for new or worsening stomach problems, including stomach pain, diarrhea, blood in your stool, or vomiting

Tell your health care provider right away if you have any new or worsening signs or symptoms of stomach and intestinal problems, including:

- diarrhea
 - more frequent bowel movements than usual
 - stools that are black, tarry, or sticky, or have blood or mucous
 - severe stomach-area pain or tenderness
 - vomiting
 - urinating less often than usual
 - dizziness
 - headache
- A condition called **Fat-Soluble Vitamin (FSV) Deficiency caused by low levels of certain vitamins (vitamin A, D, E, and K) stored in body fat.** FSV deficiency is common in patients with PFIC but may worsen during treatment. Your health care provider should do blood tests before starting and during treatment, and may monitor for bone fractures and bleeding, which are common side effects

Please see additional Important Safety Information for LIVMARLI throughout and full Prescribing Information, including Patient Information and Instructions for Use.



When cholestatic pruritus (itch) relief takes root with LIVMARLI

Imagine what may Flourish

LIVMARLI is the **ONLY** IBAT medicine with all of the following:



Early improvements with long-term impact*

.....



Growth (height and weight) data in patients with PFIC who also had improvements in cholestatic pruritus[†]

.....



Bilirubin data in patients with PFIC who also had improvements in cholestatic pruritus[†]



The broadest range of PFIC types studied

.....



Liquid (oral solution) medicine or tablet options

.....



1500+ patients have used LIVMARLI to treat their cholestatic pruritus in the last 7+ years[‡]

IBAT=ileal bile acid transporter; PFIC=progressive familial intrahepatic cholestasis.



Getting started and finding support is easy

Mirum Access Plus works closely with your doctor and insurance plan to help you access LIVMARLI.

Mirum Access Plus offers **resources, education, and services** to help you start and stay on LIVMARLI.

To learn more about LIVMARLI,
talk to your doctor or visit [LIVMARLI.com](https://www.livmarli.com)

*Improvements in cholestatic pruritus were seen as early as 2 weeks after starting LIVMARLI and continued through 2 years. Defined as an improvement in Itch Reported Outcome (ItchRO) score of 1 or more. ItchRO is a tool designed to measure itch severity over time based on a 5-point scale.

[†]Bilirubin levels and growth in patients with PFIC were observed in an exploratory analysis of the MARCH-PFIC and MARCH-ON studies.

[‡]Estimation includes clinical studies, early access program, and commercial treatment. Not all patients taking LIVMARLI will have the same experiences.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of LIVMARLI (maralixibat) oral solution and tablets?

- A condition called **Fat-Soluble Vitamin (FSV) Deficiency caused by low levels of certain vitamins (vitamin A, D, E, and K) stored in body fat.** FSV deficiency is common in patients with PFIC but may worsen during treatment. Your health care provider should do blood tests before starting and during treatment, and may monitor for bone fractures and bleeding, which are common side effects



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