Palynziq (pegvaliase-pqpz)

NEW PRODUCT SLIDESHOW

MPR

Introduction

- **Brand name:** Palynziq
- **Generic name:** Pegvaliase-pqpz
- **Pharmacological class:** Phenylalanine-metabolizing enzyme
- **Strength and Formulation:** 2.5mg/0.5mL, 10mg/0.5mL, 20mg/mL; soln for SC inj; preservative-free
- **Manufacturer:** BioMarin
- **How supplied:** Prefilled syringes (2.5mg/0.5mL, 10mg/0.5mL)—1; (20mg/mL)—1, 10
- **Legal Classification:** Rx

Indications

- To reduce blood phenylalanine levels in adults with **phenylketonuria (PKU)** who have uncontrolled concentrations >600µmol/L on current management

Palynziq


(pegvaliase-pqpz)
20 mg/mL
BioMarin Pharmaceutical Inc.
US License

Dosage & Administration

- See full labeling
- Consider premedication with H_1- or H_2-receptor antagonist, and/or antipyretic
- Give by SC inj into the front middle of thighs, abdomen, top of buttocks, back of upper arms; rotate inj sites
- Inject ≥2 inches apart if >1 inj required

Dosage & Administration

- **Induction:** initially 2.5mg once weekly for 4 weeks
- **Titration:** step-wise manner over ≥5 weeks to achieve 20mg once daily, as tolerated; see full labeling

Dosage & Administration

- **Maintenance:**
  - 20mg once daily for ≥24 weeks
  - Consider increasing to max 40mg once daily if maintained continuously on 20mg once daily for ≥24 weeks and have not achieved ≥20% reduction from pre-treatment baseline or a concentration ≤600µmol/L
- Discontinue if no response after 16 weeks of treatment at 40mg dose

Considerations for Special Populations

- **Pregnancy:** monitor and maintain phenylalanine levels 120–360µmol/L for 3 months prior to and during pregnancy; adjust dose or dietary intake to avoid <30µmol/L
- **Nursing mothers:** Monitor phenylalanine levels
- **Pediatric:** Not established
- **Elderly:** No studies conducted in geriatric patients

Warnings/Precautions

- Anaphylaxis may occur during treatment
- Have epinephrine readily available
- Perform 1st initial dose and/or readministration after anaphylaxis under supervision of a healthcare provider (consider having an adult observer as needed during therapy); monitor closely for ≥60mins post injection

Warnings/Precautions

- Management of hypersensitivity reactions may include dose adjustment, interruption, or treatment with antihistamines, antipyretics, and/or corticosteroids
- Obtain baseline blood phenylalanine concentration prior to therapy, every 4 weeks until maintenance dose established, then periodically thereafter

Warnings/Precautions

- Assess dietary protein and phenylalanine intake throughout treatment
- Do not inj into moles, scars, birthmarks, bruises, rashes, or areas where skin is hard, tender, red, damaged, burned, inflamed, tattooed
- Use lowest effective dose

Interactions

- **Concomitant other PEGylated products**; monitor for hypersensitivity reactions

Adverse Reactions

- Inj site reactions
- Arthralgia
- Hypersensitivity reactions
- Headache
- Generalized skin reactions (lasting ≥14 days)
- Pruritus
- Nausea
- Abdominal pain
- Oropharyngeal pain
- Vomiting
- Cough
- Diarrhea
- Fatigue
- Anaphylaxis

Mechanism of Action

- **Pegvaliase-pqpz**, a PEGylated phenylalanine ammonia lyase (PAL) enzyme, converts phenylalanine to ammonia and *trans*-cinnamic acid
  - Substitutes for deficient phenylalanine hydroxylase enzyme activity in PKU patients
  - Reduces blood phenylalanine concentrations

Clinical Studies

- The safety and tolerability of Palynziq were evaluated in an open-label randomized, multi-center study (**Study 301**) in 261 patients with PKU

Clinical Studies

- Target maintenance dose: 20mg or 40mg SC once daily
- Existing management options included dietary phenylalanine and protein restriction and/or prior treatment with sapropterin dihydrochloride
- Patients were required to discontinue sapropterin dihydrochloride ≥14 days prior to the first dose

Clinical Studies

- **75%** of patients reached their randomized maintenance dose (103 in the 20mg arm, 92 in the 40mg arm)
- Median time: 10 weeks in the 20mg arm and 11 weeks in the 40mg arm

Clinical Studies

- 152 patients continued to the eligibility period of **Study 302** and 12 patients from other Palynziq trials were enrolled

Clinical Studies

- Patients continued treatment for up to 13 weeks to assess eligibility for entry into the randomized withdrawal period
- 86 patients (52%) met the eligibility criteria (≥20% reduction in phenylalanine levels from baseline)

Clinical Studies

- The randomized withdrawal period was a double-blind, placebo-controlled, randomization to either continued maintenance Palynziq or matching placebo for 8 weeks

Clinical Studies

- The **primary efficacy endpoint** was the LS mean change in blood phenylalanine concentration from randomized withdrawal baseline to Week 8

Clinical Studies

- 20mg treatment arm:
  - Palynziq: **-23.3µmol/L** (95% CI, -156.2, 109.7)
  - Placebo: **949.8µmol/L** (95% CI, 760.4, 1139.1)
  - Treatment difference -973.0 (95% CI, -1204.2, -741.9; *P* <.0001)

Clinical Studies

- 40mg treatment arm:
  - Palynziq: **76.3µmol/L** (95% CI, -60.2, 212.8)
  - Placebo: **664.8µmol/L** (95% CI, 465.5, 864.1)
  - Treatment difference -588.5 (95% CI, -830.1, -346.9; *P* <.0001)

Clinical Studies

- At Study 302 randomized withdrawal Week 8, Palynziq-treated patients maintained their blood phenylalanine concentrations as compared to their randomized withdrawal baseline, whereas patients randomized to matching placebo returned to their pretreatment baseline blood phenylalanine concentrations

- For more clinical data info, see full labeling

New Product Monograph

- For more information view the product monograph available at:

  https://www.empr.com/palynziq/drug/34837/