# Iowa PDL New Drug Review

**Proprietary Name: Vykat® XR**
**Common Name: diazoxide choline**
**PDL Category: Endocrine Metabolic Agents**

**Pharmacology/Usage:** Diazoxide choline, the active ingredient of Vykat® XR, is for oral administration. The exact mechanism of action for its approved indication is not known. Vykat® XR resulted in a reduction in fasting plasma insulin from baseline through 1 year of treatment. It increased uric acid, renin secretion, and IgG concentrations, and decreased cortisol secretion. Diazoxide increases blood glucose.

**Indication:** For the treatment of hyperphagia in adults and pediatric patients 4 years of age and older with Prader-Willi syndrome (PWS).

There is no pregnancy category for this medication; however, the risk summary indicates that the available data from case reports with use during pregnancy are not sufficient to identify a drug-associated risk of major birth defects, miscarriage, or other adverse maternal outcomes. The safety and efficacy of use in the pediatric population below the age of 4 years have not been established.

**Dosage Form:** Extended-Release Tablets: 25mg, 75mg, 150mg.

**Recommended Dosage:** Prior to starting treatment, test fasting plasma glucose (FPG) and HbA1c and optimize blood glucose in patients who have hyperglycemia. For fasting glucose and HbA1c monitoring recommendations during Vykat® XR treatment and for dosage modifications based on results, refer to the prescribing information.

Do not substitute Vykat® XR with diazoxide oral suspension because the pharmacokinetic profiles are different.

Administer Vykat® XR with or without food orally once daily. Swallow the tablets whole; do not split, crush, or chew the ER tablets as doing so may compromise the ER characteristics, efficacy, or safety of the product.

The recommended oral dosage is based on body weight. The recommended starting dosage and titration schedule can be found in the prescribing information. The maximum recommended dosage is 5.8mg/kg/day or 525mg per day. Dosages above this have not been assessed in patients with PWS.

After starting treatment, monitor:

- Fasting glucose (FPG or fasting blood glucose) at least once every week for the first 2 weeks, then at least once every 4 weeks and as clinically indicated.
    - Monitor fasting glucose more frequently during the first few weeks of treatment in patients with risk factors for hyperglycemia.
- HbA1c every 3 months and as clinically indicated.
- If clinically significant elevations in fasting glucose or HbA1c occur during treatment, temporarily interrupt Vykat® XR or reduce the dosage until glycemic parameters are appropriately managed. Consider initiation or adjustment of standard antidiabetic therapy(ies). If clinically significant glucose elevations are noted during titration, titrate over a longer duration and/or to a lower dosage.

- Monitor for signs or symptoms of edema or fluid overload. Consider dosage reduction or temporary dosage interruption in the event of clinically significant fluid overload. If clinically significant fluid overload is noted during titration, titrate over a longer duration and/or to a lower dosage.
- If fluid overload or elevations in fasting glucose or HbA1c resolve after a dosage reduction:
    - For patients weighing <30kg, titrate the dosage in increments of no more than 25mg every 2 weeks or titrate over longer duration to a maximum dosage of 5.8mg/kg/day.
    - For patients weighing ≥30kg, titrate the dosage in increments of no more than 75mg every 2 weeks or titrate over longer duration to a maximum dosage of 5.8mg/kg/day.

Refer to the prescribing information for recommendations regarding dosage interruptions, missed dose, or discontinuation of treatment.

Vykat® XR has not been studied in patients with renal impairment and in patients with hepatic impairment. Its use is not recommended in patients with renal impairment and in patients with hepatic impairment.

**Drug Interactions:** Vykat® XR is a CYP1A2 substrate. Reduce the dosage of Vykat® XR when use concomitantly with strong inhibitors of CYP1A2. Refer to the prescribing information for additional information.

Vykat® XR is an inhibitor of CYP1A2. Concomitant use of Vykat® XR with CYP1A2 substrates is not recommended.

Concomitant use of Vykat® XR with strong CYP3A4 inhibitors increases exposure of diazoxide. Monitor the frequency and severity of adverse reactions from Vykat® XR. A dosage reduction of Vykat® XR may be needed when used concomitantly with strong CYP3A4 inhibitors.

Vykat® XR is a substrate of CYP3A4 and CYP1A2. Concomitant use of Vykat® XR with dual strong CYP3A4/moderate CYP1A2 inducers is not recommended.

Diazoxide is highly bound to serum proteins. Monitor INR in patients who use coumarin or its derivatives concomitantly with Vykat® XR. Dosage modification of coumarin or its derivatives may be needed when used concomitantly with Vykat® XR. In addition, monitor diphenylhydantoin serum levels when Vykat® XR is used concomitantly with diphenylhydantoin. Dosage modification of diphenylhydantoin may be needed when used concomitantly with Vykat® XR.

Both diazoxide and thiazides or other diuretics may produce hyperglycemia and hyperuricemia. Monitor for signs and symptoms of hyperglycemia and hyperuricemia when Vykat® XR is used concomitantly with thiazides or other diuretics. Dosage adjustment of Vykat® XR or diuretics may be needed when Vykat® XR is used concomitantly with diuretics.

**Box Warning:** There is no box warning listed with this product.

**Common Adverse Drug Reactions:** *Listed % incidence for adverse drug reactions= reported % incidence for drug (Vykat® XR) minus reported % incidence for placebo. Please note that an incidence of 0% means the incidence was the same as or less than placebo.* The most frequently reported adverse events included hypertrichosis (22%), edema (15%), hyperglycemia (12%), rash (10%), pyrexia (6%), arthralgia (3%), influenza (3%), and nasopharyngitis (3%).

Vykat® XR increases blood glucose, mainly due to an inhibition of insulin release from the pancreas. Hyperglycemia, including severe adverse reactions associated with diabetic ketoacidosis, occurred in Vykat® XR treated patients during clinical trials. Based on the severity of the hyperglycemia, Vykat® XR may require dosage interruption, reduction, or discontinuation in order to avoid progression to ketoacidosis. Refer to the recommended dosage section for monitoring requirements and the prescribing information for additional information.

Edema, including general, localized, and peripheral edema, occurred in 27% of Vykat® XR-treated patients as compared with 12% of placebo-treated patients in the placebo-controlled trial with treatment-naïve subjects. The antidiuretic property of diazoxide may lead to significant fluid retention, which may precipitate congestive heart

failure in patients with compromised cardiac reserve. Vykat® XR has not been studied in patients with compromised cardiac reserve and should be used with caution in these patients. Monitor for signs or symptoms of edema or fluid overload and consider appropriate clinical management, which may include Vykat® XR dosage reduction or treatment interruption, if clinically significant.

**Contraindications:** In patients with known hypersensitivity to diazoxide, other components of the product, or to thiazides.

**Manufacturer:** Soleno Therapeutics, Inc.

**Analysis:** The efficacy of Vykat® XR for the treatment of hyperphagia in adult and pediatric patients ages 4 years and older with PWS was established in a double-blind, placebo-controlled, randomized withdrawal study period (Study 2-RWP) of 16 weeks in duration, that followed an open-label study period of Vykat® XR. During Study 2-RWP, patients with hyperphagia and PWS (N=77) were randomized to continue their current oral dosage using a weight-based dosage regimen of Vykat® XR or placebo. Prior to participating in Study 2-RWP, patients received double-blind and/or open-label Vykat® XR for a mean duration of 3.3 years (range 2.5 to 4.5 years; Study 1 and Study 2-OLE). Results from Study-2 RWP are presented below.

Baseline characteristics were similar between the Vykat® XR and placebo groups, with the mean age of 14.9 years (range 7 to 29 years) and most being White (86%) and female (56%).

The primary efficacy endpoint was the change from baseline in the Hyperphagia Questionnaire for Clinical Trials (HQ-CT) Total Score at week 16. The HQ-CT is a 9-item, observer-reported outcome measure that assesses a range of hyperphagic and food-related behaviors during the prior 2 weeks. An item score of 0 indicates an absence of behaviors, with a score of 4 indicating the most frequent or severe behaviors. The HQ-CT Total Score may range from 0 to 36, with higher scores indicating greater overall severity of hyperphagic and food-related behaviors.

Results suggested that at the end of the 16-week randomized withdrawal study period, there was statistically significant worsening of hyperphagia in the placebo group relative to the Vykat® XR group, as assessed by the HQ-CT Total Score. Results are presented in the table below, which was adapted from the prescribing information.

| Treatment group | # of patients | Mean Baseline Score | Least Squares (LS) mean change from baseline | LS mean difference |
|---|---|---|---|---|
| Vykat® XR | 38 | 9.0 | 2.6 | -5.0 |
| Placebo | 39 | 8.1 | 7.6 | |

**Place in Therapy:** Vykat® XR is indicated for the treatment of hyperphagia in adult and pediatric patients 4 years of age and older with Prader-Willi syndrome (PWS). Prior to starting treatment, test fasting plasma glucose and HbA1c; optimize blood glucose in patients who have hyperglycemia. Do not substitute Vykat® XR with diazoxide oral suspension as the pharmacokinetic profiles differ. The efficacy of Vykat® XR for the treatment of hyperphagia in adult and pediatric patients ages 4 years and older with PWS was assessed in a 16-week, double-blind, placebo-controlled, randomized withdrawal study period that followed an open-label study period of Vykat® XR. The primary efficacy endpoint was the change from baseline in the HQ-CT Total Score at week 16. At the end of the 16-week randomized withdrawal study period, there was statistically significant worsening of hyperphagia in the placebo group relative to the Vykat® XR group, per the HQ-CT Total Score. Vykat® XR is the only FDA-approved treatment for hyperphagia in individuals 4 years of age and older with PWS.

## Summary

It is recommended that Vykat® XR should be non-preferred in order to confirm the appropriate diagnosis and clinical parameters for use.

**PDL Placement:** ☐ **Preferred**
☒ **Non-Preferred**

## References

[1] Vykat XR [package insert]. Redwood City, CA: Soleno Therapeutics, Inc; 2025.

**Prepared By: Iowa Medicaid Date: 09/22/2025**