OBESITY AND CHRONIC KIDNEY DISEASE

- Obesity increases the risk of chronic kidney disease and its progression to end-stage renal disease.
- In animal models of obesity the anti-inflammatory effects of BARD and analogs shown to:
  - Decrease fatty-acid synthesis
  - Improve metabolism
  - Reduce fat accumulation
  - Reduce high-fat diet-induced obesity, hypothalamic leptin resistance, and inflammation

METHODS

BEACON (NCT025151875) was a Phase 3, randomized, double-blind, parallel-group, international, multicenter trial, in patients with Stage 4 CKD and Type 2 Diabetes.

- Primary efficacy outcome: Time-to-first event in the composite outcome defined as end-stage renal disease (ESRD; need for maintenance dialysis, kidney transplantation, or death due to kidney failure) or death due to cardiovascular causes
- Assessments: Estimated GFR and vital signs (including body weight and Quelet’s body mass index (BMI)) were assessed every 4 weeks through Week 12, followed by assessments every 8 weeks thereafter. Waist circumference and hemoglobin A1c (HbA1c) were assessed every 4 weeks. A subset of the patients (n=174. 84%) consented to additional 24-hour urine collections at baseline and Week 4.

CONCLUSIONS

- BARD treatment resulted in significant reductions in body weight in an obese, CKD patient population with type 2 diabetes
  - Magnitude and rate of weight loss was dependent on baseline BMI
  - Accompanied by a significant reduction in waist circumference, which was more pronounced in patients with higher baseline BMI
  - 24-hour urinary creatinine excretion (a proxy for muscle mass) remained unchanged with BARD treatment
  - BARD treatment led to improved glycemic control, particularly in patients with HbA1c > 7.0%
- Data are consistent with the hypothesis that reductions in body weight with BARD are associated with loss of adipose tissue rather than muscle
- Although the mechanism of weight loss with BARD treatment in humans is not fully understood, it is hypothesized that BARD increases lipolysis of peripheral lipid stores and improvements in glycemic control as observed in preclinical studies

REFERENCES

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DISCLOSURES

GMC, GAB, PEP, and PRs are consultants to Reata Pharmaceuticals. DC, MM, BS, and SMS receive grant funding from Reata Pharmaceuticals. MG, AG, and CM are employees of Reata Pharmaceuticals.