



Blog Post - OBIO | AVIM Publications and Presentations Supplementary Explanation

September 22, 2025

AVIM therapy: Durability, Reversibility, and Reproducibility of Effect

Fellow Shareholders:

Recent clinical announcements related to our AVIM therapy program address three primary questions:

1. How does AVIM therapy impact blood pressure and cardiovascular function over time?
2. Is the effect durable and programmable over the long term?
3. How does can this novel therapy fit into clinical practice in the future?

The August 14 publication in [JACC: Advances](#) focused on echocardiographic measures of cardiac function in patients with diastolic dysfunction. The later August publication in [JACC: Clinical Electrophysiology](#) analyzed the positive impact of AVIM therapy on blood pressure and cardiac hemodynamics using invasive and noninvasive pressure–volume (PV) loop measurements, considered by many to be the “gold standard” for comprehensive assessment of the activity of the heart. These AVIM therapy results were also assessed using standard pacing lead placement as well as lead placements intended to achieve conduction system pacing in the same patients. Conduction system pacing is a more advanced approach to cardiac pacing that is considered potentially safer and more effective and is rapidly being adopted by electrophysiologists. Most recently, our team presented data from a long-term washout study at the [HRX Live 2025 Meeting](#) (“HRX”), along with a summary of the technology simultaneously published in the peer-reviewed *Heart Rhythm O2* journal.

What each recent AVIM therapy-related article highlights:

- **Cardiac function (Aug 14; JACC: Advances):** Echo-based analyses in patients with diastolic dysfunction, a key component in the development of heart failure with preserved ejection fraction (“HFpEF”), showed reductions in blood pressure with significant improvements in key attributes of ventricular function over 6 months.
- **Mechanism and practicality (Aug 26; JACC: Clinical Electrophysiology):** PV-loop findings detailed AVIM therapy’s favorable impact on cardiac hemodynamics, as well as the consistent effect observed across standard as well conduction system pacing approaches used in clinical practice.
- **Durability and control (HRX):** Long-term results following chronic treatment for over three and a half years with AVIM therapy supports a durable on-therapy effect. Upon deactivation of treatment, results showed a return to baseline blood pressures with AVIM therapy turned off. After a week-long therapy “washout” period, substantial blood pressure reduction was achieved when AVIM therapy was reactivated. These findings showcase the durability and programmability of significant blood pressure lowering effects as well as the utility for real-world device-based management of blood pressure in AVIM treated patients.

What’s new

At HRX, long-term follow-up from MODERATO II showed that, in a chronically-treated cohort of patients (n=16), 24-hour ambulatory systolic blood pressure (aSBP) reductions were sustained on therapy over a mean of 3.6 years (average change –8.9 mmHg; p<0.001). When AVIM was deactivated, aSBP returned to baseline with no evidence of rebound hypertension.

After a 7-day washout period, reactivation was associated with an immediate reduction in aSBP (p<0.002), to levels similar to prior on-therapy measurements - supporting reproducibility of effect.

What the [Heart Rhythm O2](#) publication adds:

- **Mechanistic framing:** the mechanism of action positions AVIM therapy as a novel device-based approach to hypertension management, delivered via a dual-chamber pacemaker, that reduces cardiac preload and afterload while modulating autonomic tone.

- **Clinical consistency:** data from prior studies show immediate, substantial and sustained blood pressure reductions in pacemaker patients with uncontrolled hypertension, independent of lead position, with signals suggestive of favorable remodeling.
- **Robust pivotal trial design:** the ongoing large-scale BACKBEAT global pivotal study in collaboration with Medtronic is thoughtfully designed with the objective of establishing safety and efficacy with robust statistical significance as well as defining the potential role of AVIM therapy in clinical practice.

Why this matters for investors:

- The *JACC: Electrophysiology*, *JACC: Advances*, HRX observations, and *Heart Rhythm O2* publication, provide **peer-reviewed clinical evidence** and **new clinical results** supporting the mechanism of action and positive clinical impact of AVIM therapy on patients with hypertensive heart disease.
- These communications are **supportive** and **complementary** to each other and continue to build on the body of evidence that, along with the key future results of the **BACKBEAT** global pivotal study, can support regulatory approval and commercial adoption of AVIM therapy in the future.

— Team OBIO

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