

PROSPECTUS SUPPLEMENT No. 2
(To the Sales Agreement Prospectus dated July 11, 2024 and
the Base Prospectus, dated July 11, 2024)

INTENSITY THERAPEUTICS, INC.

Up to \$15,000

Common Stock

We have previously entered into an at the market offering agreement (the “Offering Agreement”) with H.C. Wainwright & Co., LLC (“Wainwright”) relating to shares of our common stock offered by this prospectus supplement and the sales agreement prospectus dated July 11, 2024 (the “July 11, 2024 sales agreement prospectus”) and the base prospectus dated July 11, 2024 (the “July 11, 2024 prospectus”). In accordance with the terms of the Offering Agreement, we may offer and sell shares of our common stock, \$0.0001 par value per share, from time to time through Wainwright acting as our agent (the “ATM Offering”).

Our common stock is listed on The Nasdaq Capital Market under the symbol “INTS.” On June 10, 2025, the last reported sale price of our common stock on The Nasdaq Capital Market was \$0.503 per share.

We are filing this prospectus supplement to supplement and amend, as of June 11, 2025, the July 11, 2024 sales agreement prospectus and July 11, 2024 base prospectus to reduce the maximum aggregate gross sales price of our common stock that may be offered, issued and sold under the Offering Agreement from and after the date hereof to \$15,000 (the “ATM Offering Size Reduction”), not including the shares of common stock previously sold. Under the July 11, 2024 sales agreement prospectus, we initially registered up to \$15,000,000 of our common stock for offer and sale pursuant to the Offering Agreement, which was reduced to \$7,000,000 on November 20, 2024. As of the date of the filing of this prospectus supplement, we have sold 193,816 shares of our common stock that are covered by the July 11, 2024 sales agreement prospectus pursuant to the Offering Agreement for an aggregate gross sales price of \$577,831.

The purpose of this prospectus supplement is to update the July 11, 2024 sales agreement prospectus to reflect the ATM Offering Size Reduction. Except as modified by this prospectus supplement, the terms of the ATM Offering remain unchanged, and the Offering Agreement remains in full force and effect.

As of the date of this prospectus supplement, the aggregate market value of our outstanding shares of common stock held by non-affiliates (the “public float”), was approximately \$27,005,378, which was calculated based on our 13,920,298 outstanding shares of common stock held by non-affiliates at a price of \$1.94 per share, the closing price of our common stock on the Nasdaq Capital Market on April 21, 2025. During the 12-calendar month period that ends on, and includes, the date of this prospectus supplement, we have offered \$3,577,830 of securities pursuant to General Instruction I.B.6. of Form S-3. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell our common stock in a public primary offering with a value exceeding more than one-third of the aggregate market value of our voting and non-voting common equity held by non-affiliates in any 12-month period as long as the aggregate market value of our outstanding voting and non-voting common equity held by non-affiliates is less than \$75,000,000. In the event that we may sell additional amounts under the Offering Agreement, we will file another prospectus supplement prior to making such additional sales.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption “Risk Factors” beginning on pages [S-6](#) and [5](#) of the July 11, 2024 sales agreement prospectus and July 11, 2024 base prospectus, respectively, and in the documents incorporated by reference into the July 11, 2024 sales agreement prospectus and July 11, 2024 base prospectus, as well as the risks and uncertainties described in other documents we file with the Securities and Exchange Commission, or SEC.

Neither the SEC nor any state securities commission has approved of anyone’s investment in these securities or determined if this prospectus supplement, the July 11, 2024 sales agreement prospectus and July 11, 2024 base prospectus are truthful or complete. Any representation to the contrary is a criminal offense.

H.C. Wainwright & Co.

The date of this prospectus supplement is June 11, 2025.