

Common Stock, \$0.001 par value Up to 2,819,345 Shares

This prospectus supplement updates and supplements the prospectus dated April 8, 2013 of Stereotaxis, Inc., relating to the offering of up to 2,819,345 shares of our common stock, which includes 650,618 shares of our common stock issuable to certain of the selling stockholders upon the exercise of warrants to purchase our common stock, by the selling stockholders named in the prospectus. The shares and the warrants described in the prospectus were issued in connection with that certain Stock and Warrant Purchase Agreement dated as of May 7, 2012 between Stereotaxis and the selling stockholders named in the prospectus. We do not know if any or all of the warrants will be exercised or if any or all of the shares will be resold. We will not receive any proceeds from the sale of the shares, but, assuming exercise of all warrants to which the shares relate, we will receive up to \$2,186,727 in proceeds from the exercise of the warrants prior to those sales. Please see "Selling Stockholders" and "Plan of Distribution" for information about the selling stockholders and the manner of offering of the common stock.

Investing in our common shares involves risks. See "Risk Factors" beginning on page 5 of the prospectus.

Neither the Securities and Exchange Commission, which we refer to as SEC, nor any state securities commission or regulatory authority has approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is October 29, 2013.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means we can disclose important information to you by referring you to other documents that we filed separately with the SEC. You should consider the incorporated information as if we reproduced it in this prospectus.

We incorporate by reference into this prospectus the following documents (SEC File No. 000-50884), which contain important information about us and our business and financial results:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2012;
- our Quarterly Report on Form 10-Q for the fiscal quarters ended March 31, 2013, and June 30, 2013, and on Form 10-Q/A for the fiscal quarter ended June 30, 2013; and
- our Current Reports on Form 8-K filed January 14, 2013, February 7, 2013, March 5, 2013 (regarding Item 5.02), March 25, 2013, April 1, 2013, April 19, 2013, April 26, 2013, June 10, 2013, June 21, 2013, July 1, 2013, August 2, 2013, August 8, 2013 (regarding Items 1.01, 3.02, 8.01 and 9.01), August 16, 2013, August 19, 2013, September 3, 2013 (regarding Items 1.01, 2.03, 8.01 and 9.01), October 23, 2013, October 23, 2013 (regarding Item 8.01), October 24, 2013, and October 29, 2013, and on Form 8-K/A filed on April 17, 2013 (except, in any such case, the portions furnished and not filed pursuant to Item 2.02, Item 7.01 or otherwise).

For purposes of the registration statement of which this prospectus is a part, any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded to the extent that a statement contained herein modifies or supersedes such statement in such document. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of the registration statement of which this prospectus is a part.

You may get copies of any of the document incorporated by reference (excluding exhibits, unless the exhibits are specifically incorporated) at no charge to you by writing or calling the investor relations department at Stereotaxis, Inc. 4320 Forest Park Avenue, Suite 100, St. Louis, Missouri 63108, telephone (314) 678-6100.

2