UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

Pre-Effective
Amendment No. 2
to
FORM S-1
REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

STEREOTAXIS, INC.

Delaware (State or other jurisdiction of incorporation or organization)

94-3120386 (I.R.S. Employer Identification No.)

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(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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Approximate date of commencement of proposed sale to public: From time to time after this registration statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the SEC, acting pursuant to said Section 8(a), may determine.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

Subject to Completion, dated October 23, 2013

PROSPECTUS



Transferable Subscription Rights to Purchase up to 6,315,953 Shares of Common Stock at \$3.00 per Share and the Shares Issuable pursuant to such Subscription Rights

Subject to the conditions described in this prospectus, we are distributing, at no charge, to our holders of our common stock and of certain of our warrants (pursuant to the terms of their respective warrants), transferable subscription rights to purchase an aggregate of up to 6,315,953 shares of our common stock, par value \$0.001 per share (the "common stock"). We refer to this offering as the "rights offering." You will receive a subscription right to purchase one-third of a share of common stock at a price of \$3.00 per share for each whole share of common stock that you owned as of 5:00 p.m. New York City time on , 2013, the record date.

We have agreed with Broadridge Corporate Issuer Solutions, Inc. to serve as the rights agent for the rights offering. The rights agent will hold in escrow the funds we receive from subscribers until we complete or cancel the rights offering. If you want to participate in this rights offering and you are the record holder of your shares or participating warrants, we recommend that you submit your subscription documents to the rights agent before that deadline. If you want to participate in this rights offering and you hold shares through your broker, dealer, bank or other nominee, you should promptly contact your broker, dealer, bank or other nominee and submit your subscription documents in accordance with the instructions and within the time period provided by your broker, dealer, bank or other nominee. For a detailed discussion, see "The Rights Offering—The Subscription Rights."

We are not requiring an overall minimum subscription to complete the rights offering. However, we reserve the right to cancel the rights offering for any reason at any time before it expires. If we cancel the rights offering, all subscription payments received will be returned promptly, without interest or penalty.

The rights offering will expire at 5:00 p.m., New York City time, on the date that is twenty-one days after the commencement of the rights offering. The rights offering is currently expected to expire at 5:00 p.m. New York City time, on , 2013. We have the option to extend the expiration of the rights offering and the period for exercising your subscription rights.

You should carefully consider whether to exercise your subscription rights prior to the expiration of the rights offering. All exercises of subscription rights are irrevocable, even if we extend the expiration of the rights offering. We are not making any recommendation regarding your exercise of the subscription rights.

The subscription rights and the shares of common stock issuable on their exercise, both of which are covered by this registration statement, are being offered directly by us without the services of an underwriter or selling agent.

Once the rights offering has commenced, the subscription rights will be transferable until the expiration of the rights offering. The rights will be listed on The NASDAQ Capital Market ("Nasdaq") under the symbol "STXSR."

Our common stock is listed on Nasdaq under the symbol "STXS." On , 2013, the last reported sale price for our common stock on Nasdaq was \$ per share.

Investing in our common shares involves risks. See "Risk Factors" beginning on page 15 of this prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is , 2013.

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QUESTIONS AND ANSWERS RELATING TO THE RIGHTS OFFERING

The following are examples of what we anticipate will be common questions about the rights offering. The answers are based on selected information from this prospectus and the documents incorporated by reference herein. The following questions and answers do not contain all of the information that may be important to you and may not address all of the questions that you may have about the rights offering. This prospectus and the documents incorporated by reference herein contain more detailed descriptions of the terms and conditions of the rights offering and provide additional information about us and our business, including potential risks related to the rights offering, our common stock and our business.

What is the rights offering?

Subject to the conditions described below, we will distribute to holders of our common stock and of certain of our warrants (pursuant to the terms of their respective warrants) as of the record date of a charge, transferable subscription rights to purchase shares of our common stock. The subscription rights will be evidenced by rights certificates.

What is each subscription right?

Each subscription right gives the holder the opportunity to purchase one-third of a share of our common stock at a price of \$3.00 per share for each whole share of common stock owned (as well as holders of certain warrants, as described below) as of 5:00 p.m. New York City time on , 2013, the record date. Only whole rights are exercisable and any fractional rights remaining after aggregating all of the subscription rights issued to you will be rounded down to the nearest whole number. You will not receive any payment with respect to fractional rights that are rounded down. In the rights offering, we will grant to you, as a stockholder of record as of 5:00 p.m., New York City time, on the record date, rights for each share of our common stock you owned at that time. For example, if you owned 200 shares of our common stock as of 5:00 p.m., New York City time, on the record date, you would receive 200 subscription rights and would have the right to purchase 66 shares of common stock (rounded down from approximately 66.66 shares of common stock) for \$3.00 per share with your subscription rights. You may exercise any whole number of your subscription rights, or you may choose not to exercise any subscription rights. In order to properly exercise your subscription right, you must deliver the subscription payment and a properly completed rights certificate, or if you hold your rights through a broker, dealer, custodian bank or other nominee, complete and return to your record holder the form entitled "Beneficial Owner Election Form" or such other appropriate documents as are provided by your record holder related to your subscription right prior to the expiration of the rights offering.

If you hold your shares in the name of a broker, custodian bank, dealer or other nominee who uses the services of the Depository Trust Company, or "DTC," DTC will issue the appropriate number of subscription rights to your nominee for each share of our common stock you own on the record date. The subscription right of each whole subscription right can then be used to purchase one share of common stock for \$3.00 per share. As in the example above, if you owned 200 shares of our common stock on the record date, you would receive 200 subscription rights and would have the right to purchase 66 shares of common stock (rounded down from approximately 66.66 shares of common stock) for \$3.00 per share with your subscription right. For an explanation of the ability of our warrant holders to participate in the rights offering," below.

Will fractional subscription rights be issued?

Fractional subscription rights remaining after aggregating all of the rights distributed to you will be rounded down to the nearest whole number. You will not receive any payment with respect to fractional shares that are rounded down.

Why are we conducting the rights offering?

On August 7, 2013, we entered into separate restructuring transactions, pursuant which, holders of \$8.475 million in original aggregate principal amount of unsecured, subordinated, convertible debentures (the "Debentures") (i) elected, to (a) exercise for cash, all of their Warrants to purchase common stock that were issued in connection with the Debentures; and (b) converted, in accordance with their terms, a specified portion of their Debentures for shares of common stock; (ii) pursuant to a separate transaction subsequent to the completion of the transactions contemplated by (i)(a) and (b) of this paragraph, elected to exchange, pursuant to an Amendment and Exchange Agreement, through an exchange made in reliance upon Section 3(a)(9) of the Securities Act of 1933, the balance of their Debentures for (x) shares of common stock at an exchange price per share determined so that the blended conversion and exchange price, per participating holder, for all shares of common stock being issued for such participating holder's Debentures equals a price per share of \$3.00 and (y) certain new warrants (equal in number and substantially identical in their terms to the Warrants exercised). In connection with the above transactions, we determined to consider to offer to existing stockholders of the Company the right to subscribe for and to purchase additional shares of common stock at a price of \$3.00 per share, the same price as the blended conversion and exchange price, and otherwise on terms to be determined.

We expect proceeds from the rights offering to be used for working capital and general corporate purposes. See "Use of Proceeds."

Am I required to exercise all of the subscription rights I receive in the rights offering?

No. You may exercise any whole number of your subscription rights, or you may choose not to exercise any subscription rights. If you do not exercise any subscription rights, the number of shares of our common stock you own will not change. However, if you choose not to exercise your subscription rights, your ownership interest in the Company will be diluted by the issuance of shares to others who do choose to exercise their subscription rights.

How soon must I act to exercise my subscription rights?

The subscription rights may be exercised at any time beginning after the commencement of the rights offering and prior to the expiration of the rights offering. The rights offering will expire at 5:00 p.m., New York City time, on the date that is twenty-one days after the commencement of the rights offering. The rights offering is currently expected to expire at 5:00 p.m. New York City time, on , 2013. If you elect to exercise any rights, the rights agent must actually receive all required documents and payments from you prior to the expiration of the rights offering. If your required subscription exercise documentation is received by the rights agent after the expiration of the rights offering, we may, in our sole discretion, choose to accept your subscription, but it shall be under no obligation to do so. We may extend the expiration of the rights offering in our sole discretion. We currently do not intend to extend the expiration of the rights offering.

When will I receive my subscription rights certificate?

As soon as practicable after the conditions to the commencement of the rights offering described below have been met, we will distribute the subscription rights and rights certificates to individuals who owned shares of our common stock or who owned certain warrants to purchase shares of our common stock that contractually provide for present participation in the rights offering, in each case, as of 5:00 p.m., New York City time, on , 2013 based on our stockholder registry maintained at the transfer agent for our common stock. If you hold your shares of common stock in "street name" through a broker, dealer, custodian bank or other nominee, you will not receive an actual subscription rights certificate. Instead, as described in this prospectus, you must instruct your broker, dealer, custodian bank or other nominee whether or not to exercise rights on your behalf. If you wish to obtain a separate subscription rights certificate, you should promptly contact your broker, dealer, custodian bank or other nominee and request a separate subscription rights certificate. It is not necessary to have a physical subscription rights certificate to elect to exercise your rights if your shares are held by a broker, dealer, custodian bank or other nominee.

May I transfer my subscription rights and will the subscription rights be listed on a stock exchange or national market?

Yes. The subscription rights will be transferable during the course of the subscription period. The rights will be listed on Nasdaq under the symbol "STXSR," and we will not commence the rights offering until the subscription rights have been so listed. However, the subscription rights are a new issue of securities with no prior trading market, and we cannot provide you any assurances as to the liquidity of the trading market for the subscription rights or the market value of the rights.

Are we requiring a minimum subscription to complete the rights offering?

Nο

Are there any conditions to completing the rights offering?

No.

Can we extend, cancel or amend the rights offering?

Yes. We may decide to cancel the rights offering at any time and for any reason before the closing of the rights offering. If we cancel the rights offering, any money received from subscribing stockholders will be returned promptly, without interest or penalty. We also have the right to extend the expiration of the rights offering for additional periods at our sole discretion. We do not presently intend to extend the expiration of the rights offering.

How do I exercise my subscription rights? What forms and payment are required to purchase shares of common stock?

If you wish to participate in the rights offering, you must take the following steps:

- deliver payment to the rights agent using the methods outlined in this prospectus before the expiration time of the rights offering, which is currently expected to be 5:00 p.m., New York City time, on , 2013, but is subject to adjustment as described above; and
- deliver a properly completed rights certificate to the rights agent before this expiration time.

If you cannot deliver your rights certificate to the rights agent prior to the expiration of the rights offering, you may follow the guaranteed delivery procedures described under "The Rights Offering—Guaranteed Delivery Procedures."

If you send a payment that is insufficient to purchase the number of shares you requested, or if the number of shares you requested is not specified in the forms, the payment received will be applied to exercise your subscription rights to the full extent possible based on the amount of the payment received.

When will I receive my new shares?

If you purchase shares of our common stock through the rights offering, you will receive your new shares as soon as practicable after the closing of the rights offering.

After I send in my payment and rights certificate, may I cancel my exercise of subscription rights?

No. All exercises of subscription rights are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your subscription rights and even if we extend the expiration of the rights offering. You should not exercise your subscription rights unless you are certain that you wish to purchase additional shares of our common stock at a subscription price of \$3.00 per share.

What should I do if I want to participate in the rights offering but my shares are held in the name of my broker, dealer, custodian bank or other naminee?

If you hold your shares of our common stock in the name of a broker, dealer, custodian bank or other nominee, then your broker, dealer, custodian bank or other nominee is the record holder of the shares you own. The record holder must exercise the subscription rights on your behalf for the shares of our common stock you wish to purchase.

If you wish to participate in the rights offering and purchase shares of our common stock, please promptly contact the record holder of your shares. We will ask your broker, dealer, custodian bank or other nominee to notify you of the rights offering. You should complete and return to your record holder the form entitled "Beneficial Owner Election Form." You should receive this form from your record holder with the other rights offering materials.

Will holders of our warrants be permitted to participate in the rights offering?

As of August 29, 2013, we had outstanding warrants to purchase an aggregate of 3,021,302 additional shares of common stock at a weighted average exercise price of \$14.41. Of that total, there were warrants to purchase an aggregate of 2,040,365 shares of common stock outstanding with a per share exercise price of between \$1.55 and \$6.60, and the weighted average exercise price of those warrants was \$3.44. Absent language to the contrary in the applicable governing documents, holders of warrants may not participate in the rights offering without first exercising their warrants for shares of common stock prior to the record date. Holders of warrants to purchase an aggregate of 600,648 shares of common stock at a weighted average exercise price of \$20.89 may not participate in the rights offering without first exercising such warrants for shares of common stock prior to the record date. In addition, in accordance with the provisions of the respective governing documents, holders of warrants to purchase an aggregate of 1,814,404 shares of common stock at a weighted average exercise price of \$15.95 may participate in the rights offering without first exercising their warrants for shares of common stock, as if such warrants had been exercised for the maximum possible number of shares of common stock that such warrant could be exercised for on the date immediately prior to the record date. Lastly, in accordance with the provisions of the respective governing documents, holders of warrants to purchase an aggregate of 606,250 shares of common stock at a weighted average exercise price of \$3.36 will, at such time as such warrants are exercised for shares of common stock (if at all), receive rights to purchase shares of common stock as if such warrants were exercised for shares of common stock on the date immediately prior to the record date, even if such exercise occurs after the record date.

How many shares of our common stock will be outstanding after the rights offering?

We expect that, as of the record date, we will have approximately 15,926,558 shares of our common stock issued and outstanding and the numbers set forth in this paragraph are based on that expectation. If the rights offering is fully subscribed, meaning that we issue the maximum possible number of shares of common stock upon exercise of rights, including 100% participation of the warrant holders (even though some warrants are currently out of the money) we will issue an aggregate of 6,315,953 shares in connection with the rights offering in exchange for an exercise price of \$3.00 per share, or an aggregate of \$18,947,859. Assuming all 3,021,302 warrants outstanding are exercised, we would have an aggregate of 25,263,813 shares outstanding thereafter. Please see "Use of Proceeds" and "The Rights Offering."

Are any of the Company's officers or directors participating in the rights offering?

To our knowledge, none our officers or directors have indicated whether or not they will exercise rights in the rights offering.

Have any other stockholders indicated that they will exercise their rights?

To our knowledge, none of our other stockholders have indicated whether or not they will exercise rights in the rights offering.

Are there risks in exercising my subscription rights?

Yes. The exercise of your subscription rights involves risks. Exercising your subscription rights involves the purchase of additional shares of our common stock and should be considered as carefully as you would consider any other equity investment. Among other things, you should carefully consider the risks described under the heading "Risk Factors" in this prospectus and the documents incorporated by reference herein.

If the rights offering is not completed, will my subscription payment be refunded to me?

Yes. The rights agent will hold all funds it receives in a segregated bank account until completion of the rights offering. If the rights offering is not completed, all subscription payments received by the rights agent will be returned, without interest, as soon as practicable. If you own shares in "street name," it may take longer for you to receive payment because the rights agent will return payments through the record holder of the shares.

If the rights offering is not completed, will the purchase price of any subscription rights I purchase in the open market or otherwise be returned to me?

No. The conditions to the completion of the rights offering are described below in the section of this prospectus entitled "The Rights Offering."

How do I exercise my subscription rights if I live outside the United States?

We will not mail this prospectus or the rights certificates to stockholders whose addresses are outside the United States or who have an army post office or foreign post office address. The rights agent will hold the rights certificates for their account. To exercise subscription rights, our foreign stockholders must notify the rights agent and timely follow the procedures described in "The Rights Offering—Foreign Stockholders."

What fees or charges apply if I purchase shares of common stock?

We are not charging any fee or sales commission to issue subscription rights to you or to issue shares to you if you exercise your subscription rights. If you hold your shares through a nominee and exercise your subscription rights through the record holder of your shares, you are responsible for paying any fees your record holder may charge you.

What are the U.S. federal income tax consequences of exercising subscription rights?

For U.S. federal income tax purposes, you will not recognize income or loss in connection with the receipt or exercise of subscription rights unless the rights offering is part of a "disproportionate distribution" within the meaning of applicable tax rules (in which case you may recognize taxable income upon receipt of the subscription rights). We believe that the rights offering will not be part of a disproportionate distribution, but certain aspects of that determination are unclear. This position is not binding on the Internal Revenue Service (the "IRS") or the courts, however. You are urged to consult your own tax advisor as to your particular tax consequences resulting from the receipt and exercise of subscription rights and the receipt, ownership and disposition of our common stock. For further information, please see "Material U.S. Federal Income Tax Consequences."

To whom should I send my forms and payment?

If your shares are held in the name of a broker, dealer or other nominee, then you should send your subscription documents, rights certificate, notices of guaranteed delivery and subscription payment to that record holder. If you are the record holder, then you should send your subscription documents, rights certificate, notices of guaranteed delivery and subscription payment by hand delivery, first class mail or courier service to:

By hand or overnight courier:

Broadridge Corporate Issuer Solutions, Inc. Attn: Re-Organization Dept., 1981 Marcus Ave., Suite 100 Lake Success, NY 11042-1046.

By mail:*

Broadridge Corporate Issuer Solutions, Inc. Attn: Re-Organization Dept., P.O. Box 1317 Brentwood, NY 11717.

* If your chosen delivery method is USPS Priority Mail or USPS Registered Mail, you must utilize the overnight courier address.

You are solely responsible for completing delivery of your subscription documents, rights certificate and payment to the rights agent or, if you are not a record holder to your broker, dealer, custodian bank or other nominee. We urge you to allow sufficient time for delivery of your subscription materials to the rights agent or your broker, dealer, custodian bank or other nominee.

Whom should I contact if I have other questions?

If you have other questions or need assistance, please contact the rights agent, Broadridge Corporate Issuer Solutions, Inc., at (855) 300-4994.

PROSPECTUS SUMMARY

This summary highlights specific information contained elsewhere or incorporated by reference in this prospectus. However, this summary is not complete and does not contain all of the information you should consider before investing in our common stock, and it is qualified in its entirety by the more detailed information included in or incorporated by reference into this prospectus. To understand this offering fully, you should carefully read this entire prospectus, including the risks discussed under the "Risk Factors" section and our financial statements and related notes.

The Company

We design, manufacture and market robotic systems and instruments for use primarily by electrophysiologists for the treatment of abnormal heart rhythms known as cardiac arrhythmias. We offer our proprietary Epoch™ Solution, an advanced remote robotic navigation system for use in a hospital's interventional surgical suite, or "interventional lab". We believe the *Epoch* Solution revolutionizes the treatment of arrhythmias and coronary artery disease by enabling enhanced safety, efficiency and efficacy for catheter-based, or interventional, procedures. The *Epoch* Solution is comprised of the Niobe® ES Robotic Magnetic Navigation System ("*Niobe* ES system"), Odyssey® Information Management Solution ("*Odyssey* Solution"), and the Vdrive™ Robotic Navigation System ("*Vdrive* system"). We believe that our technology represents an important advance in the ongoing trend toward fully digitized, integrated and automated interventional labs and provides substantial, clinically important improvements over manual interventional methods, which often result in long and unpredictable procedure times with suboptimal therapeutic outcomes. We believe that our technology represents an important advance supporting efficient and effective information management and physician collaboration. The core elements of our technology, especially the *Niobe* ES system, are protected by an extensive patent portfolio, as well as substantial know-how and trade secrets.

Our *Niobe* ES system is the latest generation of the *Niobe* Robotic Magnetic Navigation System ("*Niobe* system"), which allows physicians to more effectively navigate proprietary catheters, guidewires and other delivery devices, both our own and those we are co-developing through strategic alliances, through the blood vessels and chambers of the heart to treatment sites in order to effect treatment. This is achieved using computer-controlled, externally applied magnetic fields that precisely and directly govern the motion of the internal, or working, tip of the catheter, guidewire or other interventional devices. We believe that our *Niobe* ES system represents a revolutionary technology in the interventional lab, bringing precise remote digital instrument control and programmability to the interventional lab, and has the potential to become the standard of care for a broad range of complex cardiology procedures.

The *Niobe* system is designed primarily for use by interventional electrophysiologists in the treatment of arrhythmias and approximately 1% of usage is by interventional cardiologists in the treatment of coronary artery disease. To date the significant majority of the Stereotaxis installations worldwide are intended for use in electrophysiology. The *Niobe* system is designed to be installed in both new and replacement interventional labs worldwide. Current and potential purchasers of our *Niobe* system include leading research and academic hospitals as well as community and regional medical centers around the world.

The *Niobe* system has been used in more than 60,000 procedures and is supported by more than 200 peer-reviewed publications in leading medical journals such as PACE, Europace, the Journal of the American College of Cardiology and the Journal of Interventional Cardiac Electrophysiology. *Niobe* system revenue represented 26%, 19%, and 40% of revenue for the years ended December 31, 2012, 2011, and 2010, respectively.

Stereotaxis has also developed the *Odyssey* Solution which provides an innovative enterprise solution for integrating, recording and networking interventional lab information within hospitals. The *Odyssey* Solution

consists of two lab solutions including *Odyssey* Vision and the *Odyssey* CinemaTM system. *Odyssey* Vision consolidates all of the lab information from multiple sources, freeing doctors from managing complex interfaces during patient therapy for optimal procedural and clinical efficiency. The *Odyssey* Cinema system is an innovative solution delivering synchronized content targeted to improve care, enhance performance, increase referrals and market services. This tool includes an archiving capability that allows clinicians to store and replay entire procedures or segments of procedures. This information can be accessed from locations throughout the hospital local area network and over the Internet from anywhere with sufficient bandwidth. The *Odyssey* Solution may be acquired either as part of the *Epoch* Solution or on a stand-alone basis for installation in interventional labs and other locations where clinicians desire improved clinical workflows and related efficiencies. *Odyssey* system revenue represented 14%, 18%, and 18% of revenue for the years ended December 31, 2012, 2011, and 2010, respectively.

Our *Vdrive* system provides navigation and stability for diagnostic and therapeutic devices designed to improve interventional procedures. The Vdrive system complements the Niobe ES system control of therapeutic catheters for fully remote procedures and enables single-operator workflow and is sold as two options, the Vdrive system and the Vdrive Duo system. In addition to the Vdrive system and the Vdrive Duo system, we also manufacture and market various disposable components (V-LoopTM, V-SonoTM, V-CASTM, and V-CAS DeflectTM catheter manipulators) which can be manipulated by these systems.

We promote the full *Epoch* Solution in a typical hospital implementation, subject to regulatory approvals or clearances. The full *Epoch* Solution implementation requires a hospital to agree to an upfront capital payment and recurring payments. The upfront capital payment typically includes equipment and installation charges. The recurring payments typically include disposable costs for each procedure, equipment service costs beyond warranty period, and software licenses. In hospitals where the full Epoch Solution has not been implemented, equipment upgrade or expansion can be implemented upon purchasing of the necessary upgrade or expansion.

Not all products have and/or require regulatory clearance in all of the markets we serve. Please refer to "Regulatory Approval" in Item 1 of our Form 10-K for the year ended December 31, 2012 for a description of our regulatory clearance, licensing, and/or approvals we currently have or are pursuing. In addition, the *Niobe* system has been approved in Japan and the *V-Sono* ICE catheter manipulator has received clearance in the U.S.

As of June 30, 2013 and December 31, 2012, we had approximately \$8.4 million and \$8.9 million, respectively, of backlog, consisting of outstanding purchase orders and other commitments for these systems. We had backlog of approximately \$20 million and \$43 million as of December 31, 2011 and 2010, respectively, using the same active backlog criteria. Of the June 30, 2013 backlog, we expect approximately 60% to be recognized as revenue over the course of the remainder of 2013. There can be no assurance that we will recognize such revenue in any particular period or at all because some of our purchase orders and other commitments are subject to contingencies that are outside our control. These orders and commitments may be revised, modified or canceled, either by their express terms, as a result of negotiations or by project changes or delays. In addition, the sales cycle for the *Epoch* Solution is lengthy in process and generally involves construction or renovation activities at customer sites. Consequently, revenues and/or orders resulting from sales of our *Epoch* Solution can vary significantly from one reporting period to the next.

We have alliances with Siemens AG Medical Healthcare, Philips Healthcare and Biosense Webster, a subsidiary of Johnson & Johnson. Through these alliances, we integrate our *Niobe* system with Siemens' and Philips' market-leading cath lab imaging systems and Biosense Webster's 3D catheter location sensing technology. The Biosense alliance also provides development of disposable interventional devices, coordination of marketing and sales efforts in order to continue to introduce new enhancements around the *Niobe* system, and non-exclusive commercialization of the *Odyssey* Solution to Biosense customers in the electrophysiology field. The Siemens and Philips alliances provide for coordination of our sales and marketing efforts with those of our

alliance partners to facilitate co-placement of integrated systems. Sales to Siemens accounted for 5% of total net revenue for the year ended December 31, 2012.

We were incorporated in Delaware in June 1990 as Stereotaxis, Inc. Our principal executive offices are located at 4320 Forest Park Avenue, Suite 100, St. Louis, Missouri 63108, and our telephone number is (314) 678-6100. Our website address is www.stereotaxis.com. Information contained on our website is not incorporated by reference into and does not form any part of this prospectus. As used in this prospectus, references to "Company", "we", "our", "us" and "Stereotaxis" refer to Stereotaxis, Inc. unless the context requires otherwise. Niobe®, EpochTM, Odyssey®, Odyssey CineamaTM, Vdrive DuoTM, V-LoopTM, V-SonoTM, V-CASTM, and V-CAS DeflectTM are trademarks of Stereotaxis, Inc. All other trademarks that may appear in this prospectus are the property of their respective owners.

Recent Developments

Preliminary Earnings

On October 23, 2013, we issued a press release (the "Press Release") setting forth the following preliminary financial results for the third quarter of fiscal year 2013:

- Total revenue of approximately \$10.6 million to \$11.1 million, with system revenue between \$4.4 million and \$4.6 million and recurring revenue of approximately \$6.2 million to \$6.5 million
- One new Niobe® system order added to backlog with an estimated ending capital backlog of \$5.2 million to \$5.6 million
- Utilization decline of about 11% from the prior year third quarter and 12% from the 2013 second quarter
- Operating expenses of between \$8.2 million and \$8.6 million
- Non-cash mark-to-market expense primarily related to recent capital transactions with convertible note holders and other equity investors of approximately \$50 million
- Cash and cash equivalents of approximately \$8.4 million at September 30, 2013 and an estimated quarterly cash burn of \$1.0 million to \$2.0 million

The financial results in the Press Release are preliminary and subject to change pending our announcement of definitive results for the third quarter of 2013 and the filing of our Form 10-Q for the third quarter of 2013, which are scheduled for release in November. The preliminary financial results presented in the Press Release are based solely upon information available to us of the date of the Press Release, are not a comprehensive statement of our financial results or positions as of or for the three months ended September 30, 2013, and are subject to change pending our announcement of definitive financial results.

Japan Reimbursement Classification

On October 23, 2013, we announced that the Ministry of Health, Labor and Welfare ("MHLW") in Japan has classified our *Niobe* system as a C2 medical device. The C2 classification recognizes the *Niobe* system as a new, distinctive technology with clinical benefits and is the highest of five reimbursement categories for medical devices in Japan. The MHLW also approved reimbursement for two electrophysiology ("EP") ablation catheters compatible with *Niobe* magnetic navigation, effective October 1, 2013.

Japan's MHLW, which controls the country's reimbursement rates, will establish a more permanent "technical fee" for procedures using the *Niobe* system during its biennial review of insurance reimbursement pricing for C2 devices before April 1, 2014. Until then and effective October 1, 2013, MHLW authorized a temporary "technical fee" of 343,700 yen (or approximately \$3,500) per *Niobe* procedure, which we believe sufficiently covers the costs associated with *Niobe*'s disposable unit for catheter advancement (QuikCAS).

We received *Shonin*, or regulatory, approval of the *Niobe* magnetic navigation system in Japan in March and are in the process of selecting an incountry distributor, identifying potential customers and recruiting for part-time resources.

Cash, cash equivalents and short-term investments

Long-term debt, less current maturities

Total stockholders' equity (deficit)

Working capital Total assets

Accumulated deficit

Selected Financial Data

The following selected consolidated financial data for the years ended December 31, 2012, 2011, 2010, 2009 and 2008 and for the balance sheet data as of December 31, 2012, 2011, 2010, 2009 and 2008 have been derived from, and should be read in conjunction with our financial statements and the accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Reports on Forms 10-K. The selected financial data for the six months ended June 30, 2013 and 2012 and the balance sheet data as of June 30, 2013 and 2012 are derived from the unaudited financial statements filed on Form 10-Q for the period ended June 30, 2013. The selected data in this section is not intended to replace the financial statements. Historical results are not indicative of the results to be expected in the future.

(Unaudited)

Months Ended Year Ended December 31 June 30 2012 2009 2008 2013 2012 2011 2010 Consolidated Statements of Operations Data: 18,141,612 46,562,434 41,987,432 54,051,237 \$ 22,796,126 \$ 51,149,555 40,365,173 Cost of revenue 4,664,534 7,021,909 14,781,055 12,498,081 15,564,687 17,021,633 14,177,790 Gross margin 13,477,078 15,774,217 31,781,379 29,489,351 38,486,550 34,127,922 26,187,383 Operating costs and expenses: Research and development 3.013.303 5,021,280 8,405,086 12,886,488 12,244,163 14,260,854 17,422,828 9,110,560 28,694,540 28,660,663 Sales and marketing 12,222,069 20,607,999 31,635,415 30,178,818 General and administrative 6,700,708 7,342,219 13,394,556 16,908,656 15,010,490 21,121,164 Total operating expenses 18,824,571 24,585,568 42,407,641 61,430,559 57,445,670 57,965,884 67,204,655 Operating loss (5,347,493) (8,811,351) (10,626,262) (31,941,208) (18,959,120)(23,837,962)(41,017,272) Interest and other income (expense), net (1)(2) (2,579,446) 5,804,866 1,387,835 (89,967) (964,367) (3,656,495)(2,868,702) (9,238,427) \$ (32,031,175) \$ (19,923,487) Net loss (7,926,939) (3,006,485) \$ (27,494,457) \$ (43,885,974) Basic and diluted net loss per common share, revised (0.98)(0.49)(1.33)(5.84)(3.94)(6.34)(12.00)for reverse stock split Shares used in computing basic and diluted net loss 8,102,087 6,120,447 6,944,928 5,482,627 5,052,200 4,334,432 3,658,509 per common share, revised for reverse stock split **Consolidated Balance Sheet Data:**

(25,637,259) Other income recorded in 2010 includes \$1.5 million in grants under the Qualifying Therapeutic Discovery Project Program.

4,113,768

(11,014,416)

23,995,418

17,809,026

(392,572,812)

12,119,450

(2.436.231)

36,615,855

15,237,558

(13,478,280)

(378,413,931)

7,777,718 (5,715,760)

32,165,944

16 824 736

(384,645,873)

(18,790,226)

13,954,919

(6.596.218)

39,931,832

17,290,531

(375,407,446)

(18,828,895)

35,248,819 12,395,426 65,761,792

8,000,000

(343,376,271)

10,475,246

30,546,550 12,878,277

56,120,516

10.346,655

7,641,343

(323,452,784)

30,355,657 10,097,082

59,440,365

12,036,723

4,770,681

(295,958,327)

Other income recorded in six months ended 2013, six month ended 2012, full year 2012, 2011, 2010, and 2009 includes \$.9 million, \$9.3 million, \$8.2 million, \$3.4 million, \$0.6 million, and \$0.9 million in warrant and other mark-to-market adjustments, respectively.

The Rights Offering

The following summary describes the principal terms of the rights offering, but is not intended to be complete. See the information under the heading "The Rights Offering" in this prospectus for a more detailed description of the terms and conditions of the rights offering.

Securities Offered

Subject to the conditions described in this prospectus, we are distributing, at no charge, to our stockholders and to certain of our warrant holders (pursuant to the terms of their respective warrants), transferable subscription rights to purchase an aggregate of up to 6,315,953 shares of our common stock. Holders of our common stock will receive a subscription right to purchase one-third of a share of common stock for each share of common stock owned at 5:00 p.m., New York City time, as of the record date set forth below, for a price of \$3.00 per share. For a summary of the treatment of outstanding warrants to purchase shares of common stock in the Rights Offering, see "—Treatment of Warrants" below.

Record Date

, 2013.

Expiration of the Rights Offering

The rights offering will expire at 5:00 p.m., New York City time, on the date that is twenty-one days after the commencement of the rights offering. The rights offering is currently expected to expire at 5:00 p.m. New York City time, on , 2013. We may extend the expiration of the rights offering in our sole discretion. If your required subscription exercise documentation is received by the rights agent after the expiration of the rights offering, we may, in our sole discretion, choose to accept your subscription, but it shall be under no obligation to do so.

Subscription Price

\$3.00 per share, payable in cash. To be effective, any payment related to the exercise of a right must clear prior to the expiration of the rights offering.

Use of Proceeds

We expect proceeds from the rights offering to be used for working capital and general corporate purposes. See "Use of Proceeds."

Transferability of Rights

The subscription rights will be transferable during the course of the subscription period. The rights will be listed on Nasdaq under the symbol "STXSR," and we anticipate that the rights will be listed upon commencement of the rights offering. However, the subscription rights are a new issue of securities with no prior trading market, and we cannot provide you any assurances as to the liquidity of the trading market for the subscription rights or the market value of the rights.

No Board Recommendation

We are making no recommendation regarding your exercise of the subscription rights. You are urged to make your decision based on your own assessment of our business and the rights offering. Please see "Risk Factors" for a discussion of some of the risks involved in investing in our common stock.

Conditions

We are not requiring a minimum subscription to complete the rights offering.

No Revocation

All exercises of subscription rights are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your subscription rights and even if we extend the expiration of the rights offering. You should not exercise your subscription rights unless you are certain that you wish to purchase additional shares of our common stock at a subscription price of \$3.00 per share.

U.S. Federal Income Tax Considerations

You will not recognize taxable income for U.S. federal income tax purposes in connection with the receipt of subscription rights in the rights offering if the rights offering is not part of a "disproportionate distribution" within the meaning of Section 305 of the Internal Revenue Code of 1986, as amended ("Code"). A "disproportionate distribution" is a distribution or a series of distributions, including deemed distributions, that has the effect of the receipt of cash or other property by some stockholders or holders of debt instruments or other securities convertible into stock and an increase in the proportionate interest of other stockholders in a company's assets or earnings and profits. We do not believe that the conversion of some and the exchange of the remainder of our subordinated notes on August 7, 2013, for Stereotaxis common stock and warrants to purchase Stereotaxis common stock and the distribution of the subscription rights as described herein constitutes a series of distributions or deemed distributions that has the effect of the receipt of cash or other property by our subordinated note holders and an increase in the proportionate interests of the holders of our common stock in our assets and earnings and profits within the meaning of Code Section 305. We intend to take the position that the subscription rights issued pursuant to the rights offering are not part of a disproportionate distribution. The disproportionate distribution rules are complicated, however, and their application is uncertain. Accordingly, it is possible that the IRS could challenge our position. You may be required to allocate a portion of your tax basis in your Stereotaxis common stock to the subscription rights we distribute to you in the offering (which will carry over and become part of any of our common stock acquired upon exercise of the rights) if you determine the value of the stock rights equals or exceeds 15% of the fair market value of our common stock on the date we distribute the rights to you or if you so elect to allocate a portion of your tax basis to the rights. For further information, please see "Risk Factors—The tax treatment of the rights offering is somewhat uncertain and it may be treated as a taxable event to stockholders" and "Material U.S. Federal Income Tax Consequences."

Extension, Amendment, Withdrawal and Termination

The period for exercising your subscription rights may be extended by us in our sole discretion. We may extend the expiration date of the rights offering by giving oral or written notice to the rights agent on or before the scheduled expiration date. If we elect to extend the

expiration of the rights offering, we will issue a press release announcing such extension no later than 9:00 a.m., Eastern Time, on the next business day after the most recently announced expiration date.

Procedures for Exercising Rights To exercise your subscription rights, you must complete the rights certificate and deliver it to the rights agent, Broadridge Corporate Investor Solutions, Inc., together with full payment for all the subscription rights you elect to exercise under the subscription right. You may deliver

such subscription documents and payments by mail or commercial carrier. If regular mail is used for this purpose, we recommend using registered mail, properly insured, with return receipt requested or, if you are not a record holder, to your broker, dealer, custodian bank or

other nominee.

If you cannot deliver your rights certificate to the rights agent prior to the expiration of the rights offering, you may follow the guaranteed delivery procedures described under "The Rights Offering—Guaranteed Delivery Procedures."

Rights Agent Broadridge Corporate Investor Solutions, Inc.

Shares Outstanding Before the Record Date We expect that approximately 15,926,558 shares of our common stock will be issued and outstanding as of the record date.

Shares Outstanding After Completion of the Rights If the rights offering is fully subscribed, meaning that we issue the maximum possible number

of shares of common stock upon exercise of rights, including 100% participation of the warrant holders (even though some warrants are currently out of the money) we will issue an aggregate of 6,315,953 shares in connection with the rights offering in exchange for an aggregate exercise price of \$3.00, and, assuming all 3,021,302 warrants outstanding are

exercised, have an aggregate of 25,263,813 shares outstanding thereafter.

Stockholders considering making an investment by exercising subscription rights in the rights offering or by purchasing rights in the open market or otherwise should carefully read and consider the information set forth in "Risk Factors" beginning on page 15 of this prospectus, the documents incorporated by reference herein and the risks that we have highlighted in other

sections of this prospectus.

Our common stock trades on Nasdaq under the trading symbol "STXS" and we intend to apply to list the shares to be issued in connection with the rights offering, on Nasdaq under the same symbol. The rights will be listed on Nasdaq under the symbol "STXSR," and we anticipate that the rights will be listed upon commencement of the rights offering. As a result, you may transfer or sell your subscription rights if you do not want to purchase any shares of our common stock. However, the subscription rights are a new issue of securities with no prior trading market, and we cannot provide you any assurances as to the liquidity of the trading

market for the subscription rights or the market value of the rights.

Offering

Risk Factors

NASDAQ Capital Market Trading Symbol

Treatment of Warrants

As of August 29, 2013, we had outstanding warrants to purchase an aggregate of 3,021,302 additional shares of common stock at a weighted average exercise price of \$14.41. Of that total, there were warrants to purchase an aggregate of 2,040,365 shares of common stock outstanding with a per share exercise price of between \$1.55 and \$6.60, and the weighted average exercise price of those warrants was \$3.44. Absent language to the contrary in the applicable governing documents, holders of warrants may not participate in the rights offering without first exercising their warrants for shares of common stock prior to the record date. Holders of warrants to purchase an aggregate of 600,648 shares of common stock at a weighted average exercise price of \$ 20.89 may not participate in the rights offering without first exercising such warrants for shares of common stock prior to the record date. In addition, in accordance with the provisions of the respective governing documents, holders of warrants to purchase an aggregate of 1,814,404 shares of common stock at a weighted average exercise price of \$15.95 may participate in the rights offering without first exercising their warrants for shares of common stock, as if such warrants had been exercised for the maximum possible number of shares of common stock that such warrant could be exercised for on the date immediately prior to the record date. Lastly, in accordance with the provisions of the respective governing documents, holders of warrants to purchase an aggregate of 606,250 shares of common stock at a weighted average exercise price of \$3.36 will, at such time as such warrants are exercised for shares of common stock (if at all), receive rights to purchase shares of common stock as if such warrants were exercised for shares of common stock on the date immediately prior to the record date, even if such exercise occurs after the record date.

RISK FACTORS

Investing in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risks described in, or incorporated by reference in, this prospectus, including the risks described below and under the caption "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2012, our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2013 and June 30, 2013, and in any other reports that we file with the SEC, along with the other information included or incorporated by reference in this prospectus, in evaluating an investment in our common stock. The information included or incorporated by reference in this prospectus may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. For a description of these reports and documents, and information about where you can find them, see the sections entitled "Where You Can Find Additional Information" and "Incorporation of Certain Documents by Reference" in this prospectus.

The risks and uncertainties described in this prospectus and the documents incorporated by reference in this prospectus are not the only ones facing us. Additional risks and uncertainties that we do not presently know about or that we currently believe are not material may also adversely affect our business. If any of the risks and uncertainties described in this prospectus or the documents incorporated by reference herein actually occur, our business, financial condition and results of operations could be adversely affected in a material way. As a result, the trading price of our common stock and/or the value of any other securities we may issue may decline, and you might lose part or all of your investment.

Risks Related to the Rights Offering

The market price of our common stock is volatile and may decline before or after the subscription rights expire.

The market price of our common stock could be subject to wide fluctuations in response to numerous factors, some of which are beyond our control. These factors include, among other things, macroeconomic conditions, industry trends and customer demands, competition, and the other factors discussed in these risk factors and under "Cautionary Note Regarding Forward-Looking Statements."

We cannot assure you that the market price of our common stock will not decline after you elect to exercise your subscription rights. If that occurs, you may have committed to buy shares of our common stock in the rights offering at a price greater than the prevailing market price, and could have an immediate unrealized loss. Moreover, we cannot assure you that following the exercise of your subscription rights you will be able to sell your common stock at a price equal to or greater than the subscription price. Until shares are delivered upon expiration of the rights offering, you will not be able to sell the shares of our common stock that you purchase in the rights offering. Certificates representing shares of our common stock purchased will be delivered as soon as practicable after expiration of the rights offering. We will not pay you interest on funds delivered to the rights agent pursuant to the exercise of subscription rights.

The rights offering may cause the price of our common stock to decrease.

The number of shares of common stock we could issue if the rights offering is completed, including with respect to holders of warrants who are entitled, pursuant to their governing documents, to participate in the rights offering without first exercising their warrants, may result in an immediate decrease in the trading price of our common stock. This decrease may continue after the completion of the rights offering. If that occurs, your purchase of shares of our common stock in the rights offering may be at a price greater than the prevailing trading price of our common stock in the aftermath of the completion of the rights offering. Further, if a substantial number of subscription rights are exercised, and the holders of the shares received upon exercise of those subscription rights choose to sell some or all of those shares, the resulting sales could depress the market price of our common stock. Lastly, since certain of our warrant holders are permitted, pursuant to the applicable

governing documents, to receive rights on the shares of stock that they receive upon exercise of warrants following the record date, the issuance of any such rights could have a negative impact on our stock price following the completion of the rights offering.

No prior market exists for the subscription rights, and if you acquire subscription rights in the open market, you may suffer a complete loss of your investment.

The subscription rights will be transferable during the course of the subscription period. The rights will be listed on Nasdaq under the symbol "STXSR," and we anticipate that the rights will be listed upon commencement of the rights offering. However, the subscription rights are a new issue of securities with no prior trading market, and we cannot provide you any assurances as to the liquidity of the trading market for the subscription rights or the market value of the subscription rights.

If you wish to sell your subscription rights or the rights agent tries to sell subscription rights on your behalf in accordance with the procedures discussed in this prospectus but such subscription rights cannot be sold, or if you provide the rights agent with instructions to exercise the subscription rights and your instructions are not timely received by the rights agent or if you do not provide any instructions to exercise your subscription rights, the subscription rights will expire and will be void and no longer exercisable.

Moreover, if you acquire subscription rights in the open market or otherwise and the rights offering is not consummated, the purchase price will not be refunded to you. Accordingly, you may suffer a complete loss of your investment if you acquire subscription rights.

The subscription price for this offering is not an indication of the value of our common stock.

The subscription price is not necessarily related to our book value, net worth or any other established criteria of value and may or may not be considered the fair value of our common stock to be offered in the rights offering. We cannot give any assurance that our common shares will trade at or above the subscription price in any given time period. After the date of this prospectus, our common stock may trade at prices above or below the subscription price.

Because our management will have broad discretion over the use of the proceeds from the rights offering, you may not agree with how we use the proceeds, and we may not invest the proceeds successfully.

We have complete discretion over the use of the proceeds from the rights offering. In addition, market factors may require us to allocate portions of the proceeds for other purposes. Accordingly, you will be relying on our management with regard to the use of the proceeds from the rights offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for the Company.

If we cancel this offering, neither we nor the rights agent will have any obligation to you except to return your subscription payments.

If we withdraw or terminate this offering, neither we nor the rights agent will have any obligation with respect to rights that have been exercised except to return, without interest or deduction, any subscription payments the rights agent received from you.

You may not revoke your subscription exercise, even if we extend the expiration of the rights offering, and you could be committed to buying shares above the prevailing market price.

Once you exercise your subscription rights, you may not revoke the exercise of such rights. If we decide to exercise our option to extend the expiration of the rights offering, you still may not revoke the exercise of your

subscription rights. The public trading market price of our common stock may decline before the subscription rights expire. If you exercise your subscription rights and, afterwards, the public trading market price of our common stock decreases below the subscription price, you will have committed to buying shares of our common stock at a price above the prevailing market price. Our common stock is traded on Nasdaq under the symbol "STXS," and the last reported sales price of our common stock on Nasdaq on October , 2013 was \$ per share. Following the exercise of your rights, you may be unable to sell your shares of our common stock at a price equal to or greater than the subscription price you paid for such shares, and you may lose all or part of your investment in our common stock.

If you do not act promptly and follow the subscription instructions, your exercise of subscription rights will be rejected.

Holders of subscription rights that desire to purchase shares in the rights offering must act promptly to ensure that all required forms and payments are actually received by the rights agent prior to the expiration of the rights offering. If you are a beneficial owner of shares, you must act promptly to ensure that your broker, dealer, custodian bank or other nominee acts for you and that all required forms and payments are actually received by the rights agent prior to the expiration of the rights offering. We are not responsible if your broker, custodian or nominee fails to ensure that all required forms and payments are actually received by the rights agent prior to the expiration of the rights offering. If you fail to complete and sign the required subscription forms, send an incorrect payment amount or otherwise fail to follow the subscription procedures that apply to your exercise in the rights offering prior to the expiration of the rights offering, the rights agent will reject your subscription or accept it only to the extent of the payment and documentation received. Neither we nor our rights agent undertakes to contact you concerning an incomplete or incorrect subscription form or payment, nor are we under any obligation to correct such forms or payment. We have the sole discretion to determine whether a subscription exercise properly complies with the subscription procedures.

If you make payment of the subscription price by uncertified check, your check may not clear in sufficient time to enable you to purchase shares in this rights offering.

Any uncertified check used to pay for shares to be issued in this rights offering must clear prior to the expiration date of this rights offering, and the clearing process may require five or more business days. If you choose to exercise your subscription rights, in whole or in part, and to pay for shares by uncertified check and your check has not cleared prior to the expiration date of this rights offering, you will not have satisfied the conditions to exercise your subscription rights and will not receive the shares you wish to purchase.

The tax treatment of the rights offering is somewhat uncertain and it may be treated as a taxable event to our stockholders.

If the rights offering is deemed to be part of a "disproportionate distribution" under Code Section 305, our stockholders may recognize taxable income for U.S. federal income tax purposes in connection with the receipt of subscription rights in the rights offering depending on our current and accumulated earnings and profits and your tax basis in our common stock. A "disproportionate distribution" is a distribution or a series of distributions, including deemed distributions, that has the effect of the receipt of cash or other property by some stockholders or holders of debt instruments convertible into stock and an increase in the proportionate interest of other stockholders in a company's assets or earnings and profits. The disproportionate distribution rules are complicated, however, and their application is uncertain. Please see "Material U.S. Federal Income Tax Consequences" for further information on the treatment of the rights offering.

You may be required to allocate a portion of your tax basis in our common stock to the subscription rights received in the offering.

You will be required to allocate a portion of your tax basis in your Stereotaxis common stock to the subscription rights we distribute to you in the offering (which will carry over and become part of the tax basis in any of our common stock acquired upon exercise of the rights) if you determine the value of the stock rights

equals or exceeds 15% of the fair market value of our common stock on the date we distribute the rights to you, or if you so elect to allocate a portion of your tax basis to the rights. We are not required to, nor do we intend to, provide you with an appraisal setting forth the estimated fair market value of the rights. Please see "Material U.S. Federal Income Tax Consequences" for further information on the treatment of the rights offering.

You may not be able to immediately resell any shares of our common stock that you purchase pursuant to the exercise of subscription rights upon expiration of the subscription rights offering period.

If you exercise subscription rights, you may not be able to resell the common stock purchased by exercising your subscription rights until you, or your broker, custodian bank or other nominee, if applicable, have received those shares. Moreover, you will have no rights as a stockholder in the shares you purchased in the rights offering until we issue the share certificates to you. Although we will endeavor to issue the shares as soon as practicable after completion of the rights offering and after all necessary calculations have been completed, there may be a delay between the expiration date of the rights offering and the time that the shares are issued.

The issuance or exercise of the rights, or the occurrence of various other events may adversely affect the ability of the Company to fully utilize its NOL carryforwards and/or other tax attributes of the Company.

The Company has a substantial amount of NOL carryforwards and other tax attributes for U.S. federal income tax purposes that are available both currently and in the future to offset taxation of Company taxable income and gains. The issuance and/or exercise of the rights to purchase our common stock, and/or the occurrence of certain events outside of our control, may cause the Company (and, consequently, its subsidiaries) to experience an "ownership change" under Code Section 382. This could limit the Company's ability to utilize fully its NOL carryforwards and/or other tax attributes to reduce or eliminate future U.S. federal income tax liabilities of the Company. Moreover, the recent exchange by the Company of its common stock for its convertible subordinated notes, together with recent exercises of warrants to purchase our common stock, increased the likelihood of the Company experiencing such an ownership change.

In general, an ownership change occurs when, as of any testing date, the percentage of stock of a corporation owned by one or more "5-percent shareholders," as defined in the Code and the related Treasury regulations, has increased by more than 50 percentage points over the lowest percentage of stock of the corporation owned by such shareholders at any time during the three-year period preceding such date. In general, persons who own 5% or more (by value) of a corporation's stock are 5-percent shareholders, and all other persons who own less than 5% (by value) of a corporation's stock are treated, together, as a single, public group 5-percent shareholder, regardless of whether they own an aggregate of 5% or more (by value) of a corporation's stock. If a corporation experiences an ownership change, it is generally subject to a limitation on the amount of NOL carryforward that arose prior to the ownership change that it may use on an annual basis to reduce taxable income recognized by the Company in any post-change tax period. The annual limitation is an amount equal to the equity value of the corporation immediately prior to the ownership change multiplied by the federal long-term tax-exempt rate on the date of the change. The limitation is likely to be substantial in comparison to the amount of the Company's NOL carryforwards and the amount of future tax savings from the use of such NOL carryforwards than if the Company were able to utilize fully it NOL carryforwards without limitation by Code Section 382.

If the Company were to experience an ownership change, we could potentially have higher U.S. federal income tax liabilities in the future than we would otherwise have had and it may also result in certain other adverse consequences to the Company. The Company has not adopted any type of Section 382 stock ownership plan in attempt to prevent the Company from experiencing an ownership change within the meaning of Code Section 382, and there can be no assurance that the issuance and/or exercise of the rights being distributed to purchase our common stock when coupled with the issuance of our common stock in exchange for our convertible subordinated notes, together with the recent exercises of warrants to purchase our common stock, will not cause us to experience an ownership change and realizing the adverse consequences that may arise therefrom. Even if the issuance and/or exercise of the rights to purchase our common stock does not cause currently a more than 50% change in the ownership of our stock for purposes of Code Section 382, the issuance and/or exercise of the stock rights to acquire

our common stock could make it more likely that future purchases or sales of our common stock in the market will cause a change of ownership of our stock for purposes of Code Section 382.

FORWARD-LOOKING STATEMENTS

The prospectus contains "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1985. These statements relate to, among other things:

- · our business strategy;
- · our value proposition;
- our ability to fund operations;
- · our ability to convert backlog to revenue;
- the timing and prospects for regulatory approval of our additional disposable interventional devices;
- the success of our business partnerships and strategic alliances;
- · our estimates regarding our capital requirements;
- the ability of physicians to perform certain medical procedures with our products safely, effectively and efficiently;
- · the adoption of our products by hospitals and physicians;
- the market opportunity for our products, including expected demand for our products;
- · our plans for hiring additional personnel; and
- · any of our other plans, objectives, expectations and intentions contained or incorporated into this prospectus that are not historical facts.

These statements relate to future events or future financial performance, and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may", "will", "should", "could", "expects", "plans", "intends", "anticipates", "believes", "estimates", "predicts", "potential", or "continue", or the negative of such terms or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. These statements are only predictions.

Factors that may cause our actual results to differ materially from our forward-looking statements include, among others, changes in general economic and business conditions and the risks and other factors set forth in "Item 1A—Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2012.

Our actual results may be materially different from what we expect. We undertake no duty to update these forward-looking statements after the date of this prospectus, even though our situation may change in the future. We qualify all of our forward-looking statements by these cautionary statements.

USE OF PROCEEDS

If the rights offering is fully subscribed, meaning that we issue the maximum possible number of shares of common stock upon exercise of rights, including 100% participation of the warrant holders (even though some warrants are currently out of the money), we expect to receive an aggregate of approximately \$18,947,859 from the sale of shares pursuant to the rights offering. We expect proceeds from the rights offering to be used for working capital and general corporate purposes.

CAPITALIZATION

The following table shows (i) our historical consolidated capitalization at June 30, 2013 on an actual basis, (ii) our consolidated June 30, 2013 capitalization adjusted after giving effect to the transactions subsequent to June 30, 2013, as set forth in more detail below under "Changes in Common Stock Outstanding since June 30, 2013," and (iii) our consolidated June 30, 2013 capitalization adjusted after giving effect to both the transactions subsequent to June 30, 2013 and the sale of 6,315,953 shares of common stock in this rights offering at a subscription price of \$3.00 per whole share of common stock and the receipt of net proceeds of approximately \$18.3 million from the rights offering. We anticipate that expenses relating to the rights offering will be approximately \$650,000. For purpose of this table, we have assumed that this rights offering is fully subscribed, meaning that we issue the maximum possible number of shares of common stock upon exercise of rights, including 100% participation of the warrant holders (even though some warrants are currently out of the money). However, it is impossible to predict how many rights will be exercised in this offering and therefore the net proceeds that we will receive.

You should read this table in conjunction with "Summary Historical Financial Data" and with our audited financial statements for the year ended December 31, 2012, our unaudited consolidated financial statements for the quarter ended June 30, 2013, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2012 and Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2013, and incorporated by reference in this prospectus.

| | Actual as of June 30, 2013 | As Adjusted for the August 2013 Transactions In Thousands | As Adjusted for the Rights Offering |
|--|-------------------------------|---|--|
| Cash and cash equivalents | \$ 4,114 | \$ 15,654 | \$ 34,602 |
| Stockholders' deficit: | | | |
| Preferred stock, par value \$0.001; 10,000,000 shares authorized, none | | | |
| outstanding | \$ — | \$ — | \$ — |
| Common stock, par value \$0.001; 300,000,000 shares authorized, | | | |
| 8,320,790 issued | 8 | 15 | 21 |
| Treasury stock, 4,015 shares | (206) | (206) | (206) |
| Additional paid in capital | 367,133 | 423,188 | 442,130 |
| Accumulated deficit | (392,573) | (445,709) | (445,709) |
| Total stockholders' deficit | \$ (25,638) | \$ (22,712) | \$ (3,764) |

Changes in Common Stock Outstanding since June 30, 2013

Subsequent to June 30, 2013, we issued a substantial number of shares to holders of our convertible debt, as well as certain warrant holders, in August 2013. As a result, the number of our shares of common stock outstanding increased from 8,320,790 as of June 30, 2013 to 15,926,558 as of August 29, 2013, an increase of approximately 7.6 million shares, resulting in substantial dilution to our stockholders. As a result of the below transactions, the entire amount of convertible debt was extinguished upon conversion or exchange of such notes, and we received approximately \$11.5 million in gross proceeds from the cash exercise of various warrants. As described below, certain of the warrants were exercised pursuant to a cashless exercise, which did not result in any net proceeds to us.

If the rights offering is fully subscribed by eligible stockholders and warrant holders, meaning that we issue the maximum possible number of shares of common stock upon exercise of rights, including 100% participation of the warrant holders (even though some warrants are currently out of the money), we would issue an additional 6,315,953 shares, increasing our total outstanding shares to approximately 25.3 million shares (assuming all 3,021,302 warrants outstanding are exercised).

The principle transactions in August 2013 that resulted in the increase of outstanding shares were:

- Conversion and Exchange of Convertible Notes. In August 2013, holders of all of the Company's outstanding \$8,090,000 convertible subordinated notes (i) converted \$7,990,000 aggregate principal amount of such notes into 2,377,269 shares of the Company's common stock at a conversion price of \$3.361 per share and (ii) exchanged their remaining \$100,000 aggregate principal amount of such notes, for an aggregate of 333,182 shares of the Company's common stock. In connection with the exchange, the Company issued new warrants to purchase an aggregate of 2,521,571 shares of its common stock, having an exercise price of \$3.361 per share (the "Exchange Warrants").
- Cash Warrant Exercises. In August 2013, the Company issued shares upon the cash exercise of the following warrants: (i) holders of the convertible notes describe above exercised an aggregate of warrants to purchase 2,521,571 shares of its common stock at an exercise price of \$3.361 per share, for an aggregate of \$8.475 million of gross proceeds to the Company, which warrants were originally issued in connection with their convertible notes; and (ii) certain holders of warrants issued in a private placement pursuant to a stock and warrant purchase agreement (the "PIPE Warrants") exercised warrants to purchase 911,859 shares of our common stock having an exercise price of \$3.361 per share, for an aggregate of approximately \$3.1 million gross proceeds to us.
- Cashless Warrant Exercises. In August 2013, the Company issued shares upon the cashless exercise of the following warrants: (i) venture funds affiliated with Sanderling Ventures exercised (A) PIPE Warrants to purchase an aggregate of 650,619 shares of common stock in a cashless net exercise as provided for in the PIPE Warrants, which resulted in the issuance to such funds of an aggregate of 308,194 shares of common stock and (B) warrants issued by the Company in private placements in 2012 and 2013 in connection with the extension of previously disclosed guarantees to purchase an aggregate of 262,450 shares of common stock in cashless net exercises as provided for in the warrants, which resulted in the issuance to such funds of an aggregate of 183,478 shares of common stock; and (ii) certain holders of the Exchange Warrants described above exercised Exchange Warrants to purchase an aggregate of 1,372,358 shares of common stock in cashless net exercises as provided for in the Exchange Warrants, which resulted in the issuance to such funds of an aggregate of 841,575 shares of common stock.

DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, we are authorized to issue up to 310 million shares of capital stock, par value \$0.001 per share, divided into two classes designated, respectively, "common stock" and "preferred stock." Of such shares authorized, 300 million shares are designated as common stock, and 10 million shares are designated as preferred stock.

The following is a summary of the material terms of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws. Since the terms of our certificate of incorporation and bylaws, and Delaware law, are more detailed than the general information provided below, you should only rely on the actual provisions of those documents and Delaware law. If you would like to read those documents, they are on file with the SEC, as described under the heading "Where You Can Find Additional Information" below.

On July 10, 2012, we filed a Certificate of Amendment to our Amended and Restated Certificate of Incorporation to implement a one-for-ten reverse split of our common stock (the "Reverse Stock Split"). As a result of the Reverse Stock Split, each ten shares of the Company's issued and outstanding common stock were automatically combined and converted into one issued and outstanding share of common stock. The Reverse Stock Split affected all issued and outstanding shares of the Company's common stock, as well as common stock underlying stock options, stock appreciation rights, restricted stock units, warrants and convertible debentures outstanding immediately prior to the effectiveness of the Reverse Stock Split. In addition, the Amendment

increased the number of authorized shares of the Company's common stock from 100 million to 300 million. The Reverse Stock Split did not alter the par value of common stock, which remained at \$0.001 per share, or modify any voting rights or other terms of our common stock. Unless otherwise indicated, all information set forth herein gives effect to such Reverse Stock Split.

As of August 29, 2013, there were approximately 15.9 million shares of common stock outstanding that were held of record by approximately 327 stockholders, although we believe that there is a significantly larger number of beneficial owners of our common stock. The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the shares voting are able to elect all of the directors. Subject to preferences that may be granted to any then outstanding preferred stock, holders of common stock are entitled to receive ratably only those dividends as may be declared by the board of directors out of funds legally available therefor, as well as any distributions to the stockholders. In the event of our liquidation, dissolution or winding up, holders of common stock are entitled to share ratably in all of our assets remaining after we pay our liabilities and distribute the liquidation preference of any then outstanding preferred stock. Holders of common stock have no preemptive or other subscription or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock.

Anti-Takeover Provisions of Delaware Law and Charter Provisions

Interested Stockholder Transactions. We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any "business combination" with any "interested stockholder" for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer: or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines "business combination" to include the following:

- · any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of assets with a value of 10% or more of either the total assets or all outstanding stock of the corporation;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- The receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines "interested stockholder" as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or any entity or person affiliated with or controlling or controlled by such entity or person.

In addition, some provisions of our amended and restated certificate of incorporation and amended and restated bylaws may be deemed to have an antitakeover effect and may delay or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares held by stockholders.

Cumulative Voting. Our amended and restated certificate of incorporation expressly denies stockholders the right to cumulative voting in the election of directors.

Classified Board of Directors. Our board of directors is divided into three classes of directors serving staggered three-year terms. As a result, approximately one-third of the board of directors is elected each year, which has the effect of requiring at least two annual stockholder meetings, instead of one, to replace a majority of the members of the board. These provisions, when coupled with the provision of our amended and restated certificate of incorporation authorizing only the board of directors to fill vacant directorships or increase the size of the board of directors, may deter a stockholder from removing incumbent directors and simultaneously gaining control of the board of directors by filling the vacancies created by such removal with its own nominees. The certificate of incorporation also provides that directors may be removed by stockholders only for cause. Since the board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management.

Stockholder Action; Special Meeting of Stockholders. Our amended and restated certificate of incorporation and bylaws do not permit stockholders to act by written consent. They provide that special meetings of our stockholders may be called only by the chairman of our board of directors, our chief executive officer or a majority of our directors. Further, our amended and restated certificate of incorporation provides that the stockholders may amend bylaws adopted by the board of directors or specified provisions of the certificate of incorporation by the affirmative vote of at least 66 2/3% of our capital stock.

Advance Notice Requirements for Stockholder Proposals and Directors Nominations. Our amended and restated bylaws provide that stockholders seeking to bring business before an annual meeting of stockholders, or to nominate candidates for election as directors at an annual meeting of stockholders, must provide timely notice in writing. To be timely, a stockholder's notice must be delivered to or mailed and received at our principal executive offices not more than 120 days or less than 90 days prior to the anniversary date of the immediately preceding annual meeting of stockholders. However, in the event that the annual meeting is called for a date that is not within 30 days before or after such anniversary date, notice by the stockholder in order to be timely must be received not later than the close of business on the 10th day following the date on which notice of the date of the annual meeting was mailed to stockholders or made public, whichever first occurs. Our amended and restated bylaws also specify requirements as to the form and content of a stockholder's notice. These provisions may preclude stockholders from bringing matters before an annual meeting of stockholders or from nominating directors at an annual meeting of stockholders.

Authorized But Unissued Shares. Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of Stereotaxis by means of a proxy contest, tender offer, merger or otherwise.

Amendments; Supermajority Vote Requirements. The Delaware General Corporation Law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless either a corporation's certificate of incorporation or bylaws require a greater percentage. Our amended and restated certificate of incorporation imposes supermajority vote requirements of 66 2/3% of the voting power of our capital stock in connection with the amendment of certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws,

including those provisions relating to the classified board of directors, action by written consent and the ability of stockholders to call special meetings.

Nasdaq Capital Market Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "STXS".

Transfer Agent And Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc. Its address is 1981 Marcus Ave., Suite 100, Lake Success, NY 11042-1046, and its telephone number is (855) 300-4994.

PRICE RANGE OF OUR COMMON STOCK AND DIVIDEND INFORMATION

Our common stock is listed on Nasdaq under the symbol "STXS." As of the Record Date, we had 15,926,558 shares of common stock outstanding and approximately 327 registered stockholders, including multiple beneficial holders at depositaries, banks and brokers listed as a single holder of record holding our common stock in nominee or "street" name. The last reported sales price of our common stock on date of this prospectus, was \$ per share.

Set forth below are the high and low sales prices for our common stock as reported by the Nasdaq for the two most recently completed fiscal years, the first two fiscal quarters of the current fiscal year and the period from July 1, 2013 through , 2013:

| | Low | High |
|----------------------------------|---------|---------|
| <u>2011</u> | | |
| First Quarter | \$32.40 | \$40.50 |
| Second Quarter | \$28.80 | \$42.40 |
| Third Quarter | \$ 8.80 | \$36.30 |
| Fourth Quarter | \$ 8.10 | \$13.20 |
| <u>2012</u> | | |
| First Quarter | \$ 6.50 | \$ 9.30 |
| Second Quarter | \$ 2.00 | \$ 6.80 |
| Third Quarter | \$ 1.37 | \$ 2.44 |
| Fourth Quarter | \$ 1.01 | \$ 3.39 |
| <u>2013</u> | | |
| First Quarter | \$ 1.77 | \$ 3.28 |
| Second Quarter | \$ 1.31 | \$ 2.07 |
| Third Quarter | \$ 1.26 | \$10.85 |
| Fourth Quarter (through 10/ /13) | \$ | \$ |

On , 2013, the closing price for our common stock as reported on Nasdaq was \$. We have never paid any dividends on our common stock.

THE RIGHTS OFFERING

The Rights

We are distributing to the record holders of our common stock, and holders of record of warrants to purchase shares of our common stock, which warrants contractually provide for present participation in the rights offering, as of 5:00 p.m. New York City time on the record date, transferable rights to purchase shares of our common stock at a subscription price of \$3.00 per share. The rights will entitle the holders of our common stock, and certain of our warrant holders, to purchase approximately an aggregate of 6,315,953 shares of our common stock for an aggregate purchase price of \$18,947,859.

In this distribution, each holder of record of our common stock and of certain of our warrants (pursuant to the terms of their respective warrants) will receive a subscription right to purchase one-third of a share of common stock at a price of \$3.00 per share for each whole share of our common stock owned by such holder as of 5:00 p.m., New York City time, on the record date. Those holders of warrants that are entitled to participate in the rights offering will receive a subscription right to purchase one-third of a share of common stock at a price of \$3.00 per share for each whole share of common stock such warrant holder could exercise their warrant for as of immediately prior to the record date.

With your subscription right, you may purchase one share of our common stock per whole subscription right, upon delivery of the required subscription documents and payment of the subscription price of \$3.00 per share prior to the expiration of the rights offering. You may exercise all or a portion of your subscription right. In order to properly exercise your subscription right, you must deliver the applicable subscription payment and a properly completed rights certificate or, if you hold your rights through a broker, dealer, custodian bank or other nominee, you must deliver the applicable subscription payment and a completed form entitled "Beneficial Owner Election Form" (or such other appropriate documents as are provided by your nominee related to your subscription right) to your nominee, in any event, prior to the expiration of the rights offering.

Only whole rights are exercisable. Fractional rights remaining after aggregating all of the rights distributed to you will be rounded down to the nearest whole number. You will not receive any payment with respect to fractional shares that are rounded down. Any excess subscription payments received by the rights agent will be returned, without interest, as soon as practicable.

We will deliver certificates representing shares of our common stock purchased with the subscription right as soon as practicable after the closing of the rights offering.

Dilutive Effects of the Rights Offering

If you choose not to exercise your rights, your ownership interest in the Company will be diluted by the issuance of shares to others who do choose to exercise their rights.

Method of Exercising Rights by Stockholders

The exercise of rights is irrevocable and may not be cancelled or modified, even if we extend the expiration of the rights offering in our sole discretion. You may exercise your rights as follows:

Subscription by Registered Holders

You may exercise your rights by properly completing and executing the rights certificate together with any required signature guarantees and forwarding it, together with your full subscription payment, to the rights agent at the address set forth below under "—Rights Agent," prior to the expiration of the rights offering described below.

Subscription by DTC Participants

We expect that the exercise of your rights may be made through the facilities of DTC. If your rights are held of record through DTC, you may exercise your rights by instructing DTC, or having your broker, dealer, custodian bank or other nominee instruct DTC, to transfer your rights from your account to the account of the rights agent, together with certification as to the aggregate number of rights you are exercising and the number of shares of our common stock you are subscribing for under your subscription right.

Subscription by Beneficial Owners

If you are a beneficial owner of shares of our common stock that are registered in the name of a broker, custodian bank or other nominee, or if you hold our common stock certificates and would prefer to have an institution conduct the transaction relating to the rights on your behalf, you should instruct your broker, custodian bank or other nominee or institution to exercise your rights and deliver all subscription documents and payment on your behalf prior to the expiration of the rights offering described below. Your rights will not be considered exercised unless the rights agent receives from you, your broker, custodian bank, nominee or institution, as the case may be, all of the required subscription documents and your full subscription payment prior to this expiration time.

Method of Exercising Rights by Warrant Holders

Holders of certain warrants have the contractual right to participate in the Rights Offering. To the extent that you have such rights and elect to exercise them, the exercise of rights is irrevocable and may not be cancelled or modified, even if we extend the expiration of the rights offering in our sole discretion. You may exercise your rights by properly completing and executing the rights certificate together with any required signature guarantees and forwarding it, together with your full subscription payment, to the rights agent at the address set forth below under "—Rights Agent," prior to the expiration of the rights offering described below.

Payment Method

Payments must be made in full in U.S. currency by:

- check or bank draft payable to Broadridge Corporate Issuer Solutions, Inc. upon a U.S. bank;
- · postal, telegraphic or express money order payable to the rights agent; or
- wire transfer of immediately available funds to accounts maintained by the rights agent.

Payment received after the expiration of the rights offering will not be honored, and the rights agent will return your payment to you, without interest, as soon as practicable. The rights agent will be deemed to receive payment upon:

- clearance of any uncertified check deposited by the rights agent;
- receipt by the rights agent of any certified check bank draft drawn upon a U.S. bank;
- · receipt by the rights agent of any postal, telegraphic or express money order; or
- receipt of collected funds in the rights agent's account.

If you elect to exercise your rights, we urge you to consider using a certified or cashier's check, money order, or wire transfer of funds to ensure that the rights agent receives your funds prior to the expiration of the rights offering. If you send an uncertified check, payment will not be deemed to have been received by the rights agent until the check has cleared, but if you send a certified check bank draft drawn upon a U.S. bank, a postal, telegraphic or express money order or wire or transfer funds directly to the rights agent's account, payment will be deemed to have been received by the rights agent immediately upon receipt of such instruments and wire or transfer.

Any personal check used to pay for shares of our common stock must clear the appropriate financial institutions prior to the expiration of the rights offering described below. The clearinghouse may require five or more business days. Accordingly, holders that wish to pay the subscription price by means of an uncertified personal check are urged to make payment sufficiently in advance of the expiration of the rights offering to ensure such payment is received and clears by such date.

You should read the instruction letter accompanying the rights certificate carefully and strictly follow it. DO NOT SEND RIGHTS CERTIFICATES OR PAYMENTS TO US. Except as described below under "Guaranteed Delivery Procedures," we will not consider your subscription received until the rights agent has received delivery of a properly completed and duly executed rights certificate and payment of the full subscription amount. The risk of delivery of all documents and payments is borne by you or your nominee, not by the rights agent or us.

The method of delivery of rights certificates and payment of the subscription amount to the rights agent will be at the risk of the holders of rights. If sent by mail, we recommend that you send those certificates and payments by overnight courier or by registered mail, properly insured, with return receipt requested, and that a sufficient number of days be allowed to ensure delivery to the rights agent and clearance of payment prior to the expiration of the rights offering.

Unless a rights certificate provides that the shares of our common stock are to be delivered to the record holder of such rights or such certificate is submitted for the account of a bank or a broker, signatures on such rights certificate must be guaranteed by an "eligible guarantor institution," as such term is defined in Rule 17Ad-15 of the Securities Exchange Act of 1934, subject to any standards and procedures adopted by the rights agent.

Missing or Incomplete Subscription Information

If you do not indicate the number of rights being exercised, or the rights agent does not receive the full subscription payment for the number of rights that you indicate are being exercised, then you will be deemed to have exercised the maximum number of rights that may be exercised with the aggregate subscription payment you delivered to the rights agent. If we do not apply your full subscription payment to your purchase of shares of our common stock, any excess subscription payment received by the rights agent will be returned, without interest, as soon as practicable.

Expiration Date and Extensions

The subscription period, during which you may exercise your rights, is currently set to expire at 5:00 p.m., New York City time, on , 2013. If you do not exercise your rights prior to that time, your rights will expire and will no longer be exercisable. We will not be required to issue shares of our common stock to you if the rights agent receives your rights certificate or your subscription payment after that time, regardless of when the rights certificate and subscription payment were sent, unless you send the documents in compliance with the guaranteed delivery procedures described below. We may extend the period for exercising your rights in our sole discretion. If the expiration date of the rights offering is so extended, we will give oral or written notice to the rights agent on or before the scheduled expiration date and we will issue a press release announcing such extension no later than 9:00 a.m., New York City time, on the next business day after the most recently announced expiration of the rights offering. We will extend the duration of the rights offering as required by applicable law or regulation and may choose to extend it. We do not currently intend to extend the expiration of the rights offering. To the extent that any completed subscription exercise documentation is received by the rights agent after the expiration of the rights offering, we may, in our sole discretion, choose to accept such subscription, but we shall be under no obligation to do so.

Subscription Price

The subscription price is not necessarily related to our book value, results of operations, cash flows, financial condition or the future market value of our common stock. The market price of our common stock may decline during or after the rights offering, and you may not be able to sell the underlying shares of our common stock purchased in the rights offering at a price equal to or greater than the subscription price. We do not intend to change the subscription price in response to changes in the trading price of our common stock prior to the closing of the rights offering. You should obtain a current quote for our common stock before deciding whether to exercise your rights and make your own assessment of our business and financial condition, our prospects for the future and the terms of the rights offering.

Amendment, Withdrawal and Termination

We may decide to cancel the rights offering at any time and for any reason before the closing of the rights offering. If we cancel the rights offering, any money received from subscribing stockholders or warrant holders, as the case may be, will be returned promptly, without interest or penalty. In addition, we may extend the period for exercising your rights in our sole discretion. We do not currently intend to extend the expiration of the rights offering.

Rights Agent

The rights agent for this offering is Broadridge Corporate Issuer Solutions, Inc. The address to which subscription documents, rights certificates, notices of guaranteed delivery and subscription payments other than wire transfers should be mailed or delivered is:

By hand or overnight courier:

Broadridge Corporate Issuer Solutions, Inc. Attn: Re-Organization Dept., 1981 Marcus Ave., Suite 100 Lake Success, NY 11042-1046.

By mail:*

Broadridge Corporate Issuer Solutions, Inc. Attn: Re-Organization Dept., P.O. Box 1317 Brentwood, NY 11717.

* If your chosen delivery method is USPS Priority Mail or USPS Registered Mail, you must utilize the overnight courier address.

If you deliver subscription documents, rights certificates or notices of guaranteed delivery in a manner different than that described in this prospectus, then we may not honor the exercise of your rights.

You should direct any questions or requests for assistance concerning the method of subscribing for the shares of our common stock or for additional copies of this prospectus to the rights agent at the above contact information.

Fees and Expenses

We will pay all fees charged by the rights agent. You are responsible for paying any other commissions, fees, taxes or other expenses incurred in connection with the exercise of the rights.

Financial Advisory Fee

We will pay Gordian Group, LLC, our financial advisor, a fee equal to 2.5% of the proceeds realized by us in connection with the rights offering, subject to certain contractual offsets. Gordian Group, LLC has rendered financial advisory services to us in the past and we expect them to continue to provide such services to us in the future.

Medallion Guarantee May Be Required

Your signature on each rights certificate must be guaranteed by an eligible institution, such as a member firm of a registered national securities exchange or a member of the Financial Industry Regulatory Authority, Inc., or a commercial bank or trust company having an office or correspondent in the United States, subject to standards and procedures adopted by the rights agent, unless:

- · your rights certificate provides that shares are to be delivered to you as record holder of those rights; or
- · you are an eligible institution.

You can obtain a signature guarantee from a financial institution—such as a commercial bank, savings, bank, credit union or broker dealer—that participates in one of the Medallion signature guarantee programs. The three Medallion signature guarantee programs are the following:

- Securities Transfer Agents Medallion Program (STAMP), whose participants include more than 7,000 U.S. and Canadian financial institutions.
- Stock Exchanges Medallion Program (SEMP), whose participants include the regional stock exchange member firms and clearing and trust companies.
- New York Stock Exchange Medallion Signature Program (MSP) whose participants include NYSE member firms.

If a financial institution is not a member of a recognized Medallion signature guarantee program, it would not be able to provide signature guarantees. Also, if you are not a customer of a participating financial institution, it is likely the financial institution will not guarantee your signature. Therefore, the best source of a Medallion Guarantee would be a bank, savings and loan association, brokerage firm or credit union with whom you do business. The participating financial institution will use a Medallion imprint or stamp to guarantee the signature, indicating that the financial institution is a member of a Medallion signature guarantee program and is an acceptable signature guarantor.

Notice to Nominees

If you are a broker, custodian bank or other nominee holder that holds shares of our common stock for the account of others on the record date, you should notify the beneficial owners of the shares for whom you are the nominee of the rights offering as soon as possible to learn their intentions with respect to exercising their rights. You should obtain instructions from the beneficial owner, as set forth in the instructions we have provided to you for your distribution to beneficial owners. If the beneficial owner so instructs, you should complete the appropriate rights certificate and submit it to the rights agent with the proper subscription payment. If you hold shares of our common stock for the account(s) of more than one beneficial owner, you may exercise the number of rights to which all beneficial owners in the aggregate otherwise would have been entitled had they been direct holders of our common stock on the record date, provided that you, as a nominee record holder, make a proper showing to the rights agent by submitting the form entitled "Nominee Holder Certification," which is provided with your rights offering materials. If you did not receive this form, you should contact the rights agent to request a copy.

Beneficial Owners

If you are a beneficial owner of shares of our common stock or will receive your rights through a broker, custodian bank or other nominee, we will ask your broker, custodian bank or other nominee to notify you of the rights offering. If you wish to exercise your rights, you will need to have your broker, custodian bank or other nominee act for you. If you hold certificates of our common stock directly and would prefer to have your broker, custodian bank or other nominee act for you, you should contact your nominee and request it to effect the transactions for you. To indicate your decision with respect to your rights, you should complete and return to your broker, custodian bank or other nominee the form entitled "Beneficial Owners Election Form" (or such other appropriate documents as are provided by your nominee related to your rights). You should receive this form from your broker, custodian bank or other nominee with the other rights offering materials. If you wish to obtain a separate rights certificate, you should contact the nominee as soon as possible and request that a separate rights certificate be issued to you. You should contact your broker, custodian bank or other nominee if you do not receive this form, but you believe you are entitled to participate in the rights offering. We are not responsible if you do not receive the form from your broker, custodian bank or nominee or if you receive it without sufficient time to respond.

Guaranteed Delivery Procedures

If you wish to exercise rights, but you do not have sufficient time to deliver the rights certificate evidencing your rights to the rights agent prior to the expiration of the rights offering, you may exercise your rights by the following guaranteed delivery procedures:

- deliver to the rights agent prior to the expiration of the rights offering the subscription payment for each share you elected to purchase pursuant to the exercise of rights in the manner set forth above under "—Payment Method";
- · deliver to the rights agent prior to the expiration of the rights offering the form entitled "Notice of Guaranteed Delivery"; and
- deliver the properly completed rights certificate evidencing your rights being exercised and the related nominee holder certification, if applicable, with any required signatures guaranteed, to the rights agent within three (3) business days following the date you submit your Notice of Guaranteed Delivery.

Your Notice of Guaranteed Delivery must be delivered in substantially the same form provided with the "Form of Instructions for Use of Rights Certificates," which will be distributed to you with your rights certificate. Your Notice of Guaranteed Delivery must include a signature guarantee from an eligible institution, acceptable to the rights agent. A form of that guarantee is included with the Notice of Guaranteed Delivery.

In your Notice of Guaranteed Delivery, you must provide:

- · your name;
- the number of rights represented by your rights certificate, and the number of shares of our common stock for which you are subscribing under your subscription right; and
- your guarantee that you will deliver to the rights agent a rights certificate evidencing the rights you are exercising within three (3) business days following the date the rights agent receives your Notice of Guaranteed Delivery.

You may deliver your Notice of Guaranteed Delivery to the rights agent in the same manner as your rights certificate at the address set forth above under "—Rights Agent."

The rights agent will send you additional copies of the form of Notice of Guaranteed Delivery if you need them. You should call the rights agent at (855) 300-4994 to request additional copies of the form of Notice of Guaranteed Delivery.

Transferability of Rights; Listing

The rights granted to you will be transferable and, therefore, you may sell, transfer or assign your rights to anyone.

Until the expiration of the rights offering, the rights will be listed on Nasdaq under the symbol "STXSR." The shares of common stock issued in the rights offering will be listed on Nasdaq under the symbol "STXS."

Validity of Subscriptions

We will resolve all questions regarding the validity and form of the exercise of your rights, including time of receipt and eligibility to participate in the rights offering. In resolving all such questions, we will review the relevant facts, consult with our legal advisors and we may request input from the relevant parties. Our

determination will be final and binding. Once made, subscriptions and directions are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your rights and even if we extend the rights offering, and we will not accept any alternative, conditional or contingent subscriptions or directions. We reserve the absolute right to reject any subscriptions or directions not properly submitted or the acceptance of which would be unlawful. You must resolve any irregularities in connection with your subscriptions before the subscription period expires, unless waived by us in our sole discretion. Neither we nor the rights agent shall be under any duty to notify you or your representative of defects in your subscriptions. A subscription will be considered accepted, subject to our right to withdraw or terminate the rights offering, only when a properly completed and duly executed rights certificate and any other required documents and the full subscription payment have been received by the rights agent. Our interpretations of the terms and conditions of the rights offering will be final and binding.

Escrow Arrangements; Return of Funds

The rights agent will hold funds received in payment for shares of our common stock in a segregated account pending completion of the rights offering. The rights agent will hold this money in escrow until the rights offering is completed or is withdrawn and canceled. If the rights offering is canceled for any reason, all subscription payments received by the rights agent will be returned, without interest, as soon as practicable.

Stockholder Rights

You will have no rights as a holder of the shares of our common stock you purchase in the rights offering, if any, until the closing of the rights offering has taken place. You will have no right to revoke your subscriptions after you deliver your completed rights certificate, the full subscription payment and any other required documents to the rights agent.

Foreign Stockholders

We will not mail this prospectus or rights certificates to stockholders with addresses that are outside the United States or that have an army post office or foreign post office address. The rights agent will hold these rights certificates for their account. To exercise rights, our foreign stockholders must notify the rights agent prior to 11:00 a.m., New York City time, at least three business days prior to the expiration of the rights offering and demonstrate to the satisfaction of the rights agent that the exercise of such rights does not violate the laws of the jurisdiction of such stockholder.

No Revocation or Change

Once you submit the form of rights certificate to exercise any rights, you are not allowed to revoke or change the exercise or request a refund of monies paid. All exercises of rights are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your rights and even if we extend the rights offering. You should not exercise your rights unless you are certain that you wish to purchase additional shares of our common stock at the subscription price.

Regulatory Limitation

We will not be required to issue to you shares of our common stock pursuant to the rights offering if, in our opinion, you are required to obtain prior clearance or approval from any state or federal regulatory authorities to own or control such shares and if, at the time the rights offering expires, you have not obtained such clearance or approval.

U.S. Federal Income Tax Treatment of Rights Distribution

We believe that our distribution and any stockholder's receipt and exercise of the rights to purchase shares of our common stock will not be taxable to our stockholders for the reasons described below in "Material U.S. Federal Income Tax Consequences."

No Board Recommendation to Rights Holders

Our board of directors is making no recommendation regarding your exercise of the rights. You are urged to make your decision based on your own assessment of our business and the rights offering. Please see "Risk Factors" for a discussion of some of the risks involved in investing in our common stock.

PLAN OF DISTRIBUTION

We are distributing the subscription rights and rights certificates to individuals who owned shares of our common stock and certain of our warrants (pursuant to the terms of their respective warrants) as of , 2013, 5:00 p.m. New York City time. If you wish to exercise your subscription rights and purchase shares of our common stock, you should complete the rights certificate and return it with payment for the shares to the rights agent, Broadridge, at the address set forth under "The Rights Offering—Method of Exercising Subscription Rights." If you have any questions, you should contact the rights agent, Broadridge Corporate Issuer Solutions, Inc., by calling (855) 300-4994.

Other than as described in this prospectus, we do not know of any existing agreements between or among any stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the underlying common stock.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following summary describes the material U.S. federal income tax consequences of the receipt, exercise (or expiration) and sale of the subscription rights acquired through the rights offering and owning and disposing of the shares of common stock received upon exercise of the subscription rights. Insofar as the summary relates to matters of U.S. federal income tax law and regulations, or legal conclusion with respect thereto, the summary constitutes the opinion of our tax counsel, Bryan Cave LLP.

This summary is based upon the Code of 1986, applicable Treasury regulations promulgated thereunder and administrative and judicial interpretations thereof, all as currently in effect and all of which are subject to differing interpretations or to change, possibly with retroactive effect. No assurances can be given that the Internal Revenue Service (the "IRS") would not assert, or that a court would not sustain, a position contrary to any of the tax consequences described below.

This summary applies to U.S. holders (as defined below) only and does not purport to be a complete analysis of all potential tax effects of the receipt, exercise (or expiration) or sale of the subscription rights or the owning or disposing of our common stock. For example, it does not consider the effect of any applicable state, local, foreign, estate or gift tax laws, of any tax treaty or of any non-income tax laws on the receipt, exercise (or expiration) or sale of the subscription rights, or the owning or disposing of our common stock. This summary also does not purport to discuss all aspects of U.S. federal income taxation that may be important to a particular holder in light of its particular circumstances or to holders that may be subject to special tax rules, but not limited to, holders other than U.S. holders (as defined below), partnerships or other pass-through entities or partners or other owners of such entities, banks or other financial institutions, entities that are generally exempt from tax under the Code, employee stock ownership plans, certain former citizens or residents of the United States, insurance companies, regulated investment companies, real estate investment trusts, dealers in securities

or currencies, brokers, traders, including traders in securities that have elected to use the mark-to-market method of accounting, members of an "affiliated group" (within the meaning of the Code) that includes the Company, persons holding subscription rights or shares of common stock as part of an integrated transaction, including a "straddle," "hedge," "constructive sale" or "conversion transaction," (all as such terms are defined under the Code) persons whose functional currency for tax purposes is not the U.S. dollar, and persons subject to the alternative minimum tax provisions of the Code.

In addition to applying to you only if you are a U.S. holder (as defined below), the tax consequences set forth in this summary will apply to you only to the extent that you also (i) receive the subscription rights in the rights offering, and (ii) hold the subscription rights, and the shares of common stock issued to you upon exercise of the subscription rights, as "capital assets" for U.S. federal income tax purposes. Finally, this discussion does not address U.S. holders who beneficially hold our shares through either a "foreign financial institution" (as such term is defined in Section 1471(d)(4) of the Code) or certain other non-U.S. entities specified in Section 1472 of the Code. This summary does not apply to a holder that is not a U.S. holder (as defined below).

The discussion that follows neither binds the IRS nor precludes it from adopting a position contrary to that expressed in this prospectus, and we cannot assure you that such a contrary position could not be asserted successfully by the IRS or adopted by a court if the position were litigated. We have not sought, nor will we seek, a ruling from the IRS regarding the federal income tax consequences of the rights offering or the related share issuances. The following summary does not address the tax consequences of the rights offering or the related share issuance under foreign, state, or local tax laws or tax treaties.

A "U.S. holder" is a beneficial owner of subscription rights (or common stock received upon exercise of the subscription rights) that is also one of the following:

- An individual who is a citizen or resident of the U.S. for U.S. federal income tax purposes;
- A corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the U.S., any state thereof or the District of Columbia;
- An estate the income of which is subject to U.S. federal income tax regardless of its source; or
- A trust (a) if a court within the U.S. can exercise primary supervision over its administration and one or more "United States persons" (within the meaning of the Code) are authorized to control all substantial decisions of the trust or (b) that has a valid election in effect under applicable Treasury Regulations to be treated as a "United States person," within the meaning of the Code.

If a partnership (including any entity treated as a partnership for U.S. federal income tax purposes) receives the subscription rights or holds the common stock received upon exercise of the subscription rights the tax treatment of a partner in such partnership generally will depend upon the status of the partner and the activities of the partnership. Such a partner or partnership is urged to consult its own tax advisor as to the U.S. federal income tax consequences of receiving and exercising the subscription rights and acquiring, holding or disposing of our common stock.

ACCORDINGLY, EACH HOLDER OF OUR COMMON STOCK IS URGED TO CONSULT ITS OWN TAX ADVISOR REGARDING THE SPECIFIC FEDERAL, STATE, LOCAL AND FOREIGN INCOME AND OTHER TAX AND TAX TREATY CONSIDERATIONS OF THE RECEIPT AND EXERCISE OF SUBSCRIPTION RIGHTS AND THE RECEIPT, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK.

Taxation of Subscription Rights

Receipt of Subscription Rights

The federal income tax consequences of the rights offering will depend on whether the rights offering is considered part of a "disproportionate distribution" within the meaning of the Code. A "disproportionate

distribution" is a distribution (or a series of distributions), including deemed distributions, from a corporation that has the effect of the receipt of cash or other property by some stockholders and an increase in the proportionate interest of other stockholders in the corporation's assets or earnings and profits. For purposes of the above, "stockholder" includes holders of a right to acquire stock (such as warrants or options) and holders of convertible securities, such as our subordinated notes. On August 7, 2013, the Company issued its common stock in connection with the conversion of certain Company convertible subordinated notes in accordance with the terms of such notes, and also issued its common stock and warrants to purchase its common stock in exchange for the remainder of its convertible subordinated notes that were not otherwise converted in accordance with their terms. We do not believe that the conversion of some and the exchange of the remainder of our subordinated notes on August 7, 2013, for Company common stock and warrants to purchase Company common stock and the distribution of the subscription rights as described herein constitutes a series of distributions or deemed distributions that has the effect of the receipt of cash or other property by our subordinated note holders and an increase in the proportionate interests of the holders of our common stock in the Company's assets and earnings and profits within the meaning of Code Section 305. We believe and intend to take the position, and the following discussion assumes (unless explicitly stated otherwise), that subscription rights issued pursuant to the rights offering are not part of a "disproportionate distribution," within the meaning of Section 305 of the Code and, thus, we will not treat the distribution of the subscription rights to you as a dividend of our earnings and profits that is taxable to you for U.S. federal income tax purposes. The disproportionate distribution tax rules are highly complicated, the determination is highly dependent on the existence or non-existence of certain facts, and the interpretation of such facts or lack thereof, and, as a result, their application is uncertain. Further, the determination of whether the distribution of the rights results in the receipt of a dividend depends, in part, on the presence of certain facts, and the determination of whether such facts exist cannot be made until the close of our taxable year. Finally, it is possible that the IRS is not bound by our determination and could challenge our position that, based upon the facts in our situation, the disproportionate distribution rules do not apply to our distribution of the rights. For a summary of the U.S. federal income tax consequences to a U.S. holder if the rights offering is treated as part of a "disproportionate distribution," within the meaning of the Code, see below under the heading, "Consequences if the Rights Offering Is Considered Part of a Disproportionate Distribution."

FURTHERMORE, EACH HOLDER OF OUR COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS WITH RESPECT TO THE TAX CONSEQUENCES IF THE RIGHTS OFFERING WERE TAXABLE AS A "DISPROPORTIONATE DISTRIBUTION," WITHIN THE MEANING OF THE CODE.

Distribution of the Subscription Rights May Impact the Tax Basis in Our Common Stock

If the aggregate fair market value of the subscription rights a U.S. holder receives is less than 15% of the aggregate fair market value of the U.S. holder's existing shares of common stock on the date the U.S. holder receives the subscription rights, the subscription rights will be allocated a zero basis for U.S. federal income tax purposes, unless the U.S. holder elects to allocate such holder's basis in its existing shares of common stock between the U.S. holder's existing shares of common stock and the subscription rights in proportion to the relative fair market values of the existing shares of common stock and the subscription rights determined on the date of receipt of the subscription rights. If a U.S. holder elects to allocate basis between such holder's existing shares of common stock and the subscription rights, a U.S. holder must make this election on a statement included with the U.S. holder's tax return for the taxable year in which the U.S. holder receives the subscription rights. Such an election is irrevocable.

However, if the fair market value of the subscription rights a U.S. holder receives is 15% or more of the fair market value of its existing shares of common stock on the date a U.S. holder receives the subscription rights, then such holder must allocate its basis in the U.S. holder's existing shares of common stock between a U.S. holder's existing shares of common stock and the subscription rights such holder receives in proportion to their fair market values determined on the date the U.S. holder receives the subscription rights. The determination of the fair market value of the subscription rights on or prior to the date the subscription rights are distributed to you likely would be based on a number of facts and assumptions that are speculative and uncertain. Accordingly, we

have not obtained, nor do we intend to obtain, an appraisal or otherwise make a determination of the fair market value of the subscription rights that we distribute to you. Thus, you should consider all the facts and circumstances related to the receipt of the subscription rights, including the initial trading price of the subscription rights, in determining the fair market value, if any, of the rights. Further, U.S. holders should consult with their own tax advisors to determine the proper allocation of basis between the subscription rights and the common stock with respect to which the subscription rights are received since any allocation will depend in part on facts specific to your situation.

A U.S. holder's holding period in the subscription rights will include the U.S. holder's holding period in the shares of common stock with respect to which the subscription rights were distributed.

Exercise of Subscription Rights

A U.S. holder will not recognize gain or loss on the exercise of a subscription right received in the rights offering and the tax basis of common stock acquired through the exercise of the subscription rights will equal the sum of the subscription price for the shares and a U.S. holder's adjusted tax basis in the subscription right, if any. The holding period of a share of common stock acquired when a U.S. holder exercises its subscription rights will begin on the date of exercise

Expiration of Subscription Rights

If a U.S. holder allows subscription rights received in the rights offering to expire, a U.S. holder will not recognize any gain or loss for U.S. federal income tax purposes upon expiration of the subscription rights. If a U.S. holder has tax basis in the subscription rights and such holder allows the subscription rights to expire, the tax basis of common stock owned by the U.S. holder with respect to which such subscription rights were distributed should be reallocated to the tax basis of such common stock.

Sale or Other Disposition of Subscription Rights

If a U.S. holder sells or otherwise disposes of a U.S. holder's subscription rights prior to the expiration date, a U.S. holder will recognize capital gain or loss equal to the difference between the amount of cash and the fair market value of any other property a U.S. holder receives in exchange for the rights and such U.S. holder's tax basis, if any, in the subscription rights sold or otherwise disposed of. Any capital gain or loss will be long-term capital gain or loss if the holding period for the subscription rights exceeds one year at the time of disposition. Please see above, "Distribution of the Subscription Rights May Impact the Tax Basis in Our Common Stock," for a discussion regarding the determination of a U.S. holder's holding period in their subscription rights. Long-term capital gain of a non-corporate U.S. holder is generally taxed at reduced rates. The deductibility of capital losses is subject to limitations under the Code.

Taxation of Shares of Common Stock

Distributions

Distributions with respect to shares of common stock acquired upon exercise of subscription rights will generally be taxable as dividend income when actually or constructively received to the extent of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. To the extent that the amount of a distribution exceeds our current and accumulated earnings and profits, such distribution will be treated first as a tax-free return of capital to the extent of a U.S. holder's adjusted tax basis in such shares of common stock and thereafter, as gain from the sale of our common stock. A corporate holder of our common stock who receives a dividend may be entitled to a dividends-received deduction.

Dispositions

If a U.S. holder sells or otherwise disposes of the shares of common stock acquired upon exercise of the subscription rights, such holder will generally recognize capital gain or loss equal to the difference between the

amount realized and the U.S. holder's adjusted tax basis in the shares of common stock. Such capital gain or loss will be long-term capital gain or loss if a U.S. holder's holding period for the shares of common stock is more than one year. Long-term capital gain of a non-corporate U.S. holder is generally taxed at reduced rates. The deductibility of capital losses is subject to limitations under the Code.

Consequences if the Rights Offering Is Considered Part of a Disproportionate Distribution

If the rights offering is part of a "disproportionate distribution," within the meaning of Section 305 of the Code, the distribution of subscription rights will be taxable to a U.S. holder as a dividend to the extent that the fair market value of the subscription rights a U.S. holder receives is allocable to our current or accumulated earnings and profits, if any. Dividends received by corporate U.S. holders of common stock are taxable at ordinary corporate tax rates (currently taxed at a maximum rate of 35%) subject to any applicable dividends-received deduction. Subject to the discussion of the "unearned income Medicare contribution tax" set forth below (See below, "Net Investment Income Tax"), dividends received by noncorporate U.S. holders of common stock are taxed at capital gain tax rates, provided that the U.S. holder meets the applicable holding period and certain other requirements. Any distributions in excess of our current and accumulated earnings and profits, if any, will be treated as a tax-free return of basis, and any further distributions in excess of a U.S. holder's tax basis in common stock will be treated as gain from the sale or exchange of common stock. Regardless of whether the distribution of subscription rights is treated as a dividend, as a tax-free return of basis, or as gain from the sale or exchange of our common stock, a U.S. holder's tax basis in the subscription rights the U.S. holder receives will be their fair market value.

If the receipt of subscription rights is taxable to a U.S. holder as described in the previous paragraph and the U.S. holder allows subscription rights received in the rights offering to expire, a U.S. holder should recognize a capital loss equal to such holder's tax basis in the expired subscription rights. A U.S. holder's ability to use any capital loss is subject to certain limitations under the Code. A U.S. holder will not recognize any gain or loss upon the exercise of the subscription rights, and the tax basis of the shares of our common stock acquired through exercise of the subscription rights will equal the sum of the subscription price for our common stock and the U.S. holder's tax basis in the subscription rights. The holding period for the shares of our common stock acquired through exercise of the subscription rights will begin on the date the subscription rights are exercised.

Net Investment Income Tax

Under recently enacted legislation, certain U.S. holders that are individuals, estates or trusts are subject to an additional 3.8% unearned income Medicare contribution tax on, among other things, gross dividend income on and net gains from the sale or other disposition of, stock (less certain deductions), in excess of certain thresholds, for taxable years beginning after December 31, 2012. For non-corporate U.S. holders, this tax applies to the lesser of (i) "net investment income" (as defined in the Code) and (ii) the excess of "modified adjusted gross income" (as defined in the Code) over \$200,000 (or \$250,000 if married and filing jointly or \$125,000 if married and filing separately). U.S. holders should consult their tax advisors regarding the effect, if any, of this legislation on their ownership and disposition of our common stock.

Information Reporting and Backup Withholding

Dividends in respect of our common stock and payments made to U.S. holders of proceeds from the sale of subscription rights or from the shares of common stock acquired upon exercise of the subscription rights may be subject to information reporting and/or backup withholding. Backup withholding may apply under certain circumstances if a U.S. holder (1) fails to furnish his or her social security or its taxpayer identification number ("TIN"), (2) furnishes an incorrect TIN, (3) fails to report interest or dividends properly, or (4) fails to provide a certified statement, signed under penalty of perjury, that the TIN provided is correct, that such holder is not subject to backup withholding and that such holder is a U.S. person. Any amount withheld from a payment under the backup withholding rules is allowable as a credit against (and may entitle a U.S. holder to a refund with

respect to) such holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS. Certain persons are exempt from backup withholding, including corporations and financial institutions. U.S. holders should consult their own tax advisor as to their qualification for exemption from backup withholding and the procedure for obtaining such exemption.

THE FOREGOING SUMMARY IS INTENDED ONLY FOR U.S. HOLDERS THAT RECEIVE SUBSCRIPTION RIGHTS IN THE OFFERING AND OTHERWISE HOLD SUCH RIGHTS AS A CAPITAL ASSET. ACCORDINGLY, ALL OTHER HOLDERS SHOULD CONSULT THEIR OWN TAX ADVISORS WITH RESPECT TO THE PARTICULAR FEDERAL, STATE, LOCAL AND FOREIGN TAX AND TAX TREATY CONSEQUENCES OF THE RIGHTS OFFERING AND THE RELATED SHARE ISSUANCES APPLICABLE TO SUCH HOLDER'S PARTICULAR TAX SITUATION.

LEGAL MATTERS

The validity of the securities offered hereby has been passed upon for us by Bryan Cave LLP, St. Louis, Missouri. James L. Nouss, Jr., a partner of our legal counsel Bryan Cave LLP, beneficially owns 1,172 shares of our common stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements and schedule included in our Annual Report on Form 10-K for the year ended December 31, 2012, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the financial statements), which is incorporated by reference in the registration statement. Our financial statements and schedule as of December 31, 2012 are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. The SEC's website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC. You may also read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the SEC. Please call the SEC at 1–800–SEC–0330 for further information on the operation of its Public Reference Room.

We have filed with the SEC a registration statement under the Securities Act of 1933 that registers the distribution of these securities. The registration statement, including the attached exhibits and schedules, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can get a copy of the registration statement, at prescribed rates, from the SEC at the address listed above. The registration statement and the documents referred to below under "Incorporation of Certain Documents by Reference" are also available on our Internet website, http://www.stereotaxis.com, under "Investors—All SEC Filings." We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

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, and October 23, 2013 (regarding Item 8.01), 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.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuances and Distribution.

The following table sets forth the costs and expenses payable by Stereotaxis in connection with the issuance and distribution of the securities being registered. All amounts are estimates except the SEC registration fee.

| Securities and Exchange Commission filing fee | \$ 2,585 |
|---|-----------|
| Financial advisory fees and expenses | \$450,000 |
| Legal fees and expenses | \$125,000 |
| Accounting fees and expenses | \$ 13,000 |
| Rights Agent fees and expenses | \$ 45,000 |
| Printing expenses | \$ 5,000 |
| Other | \$ 5,000 |
| Total expenses | \$645,585 |

Item 15. Indemnification of Directors and Officers.

Our amended and restated certificate of incorporation provides that, to the fullest extent permitted by the Delaware General Corporation Law as the same exists or may hereafter be amended, our directors shall not be liable to the Company or our stockholders for monetary damages for breach of fiduciary duty as a director. In addition, our certificate of incorporation provides that we may, to the fullest extent permitted by law, indemnify any person made or threatened to be made a party to an action, suit or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that such person or his or her testator or intestate is or was a director, officer or employee of the Company, or any predecessor of the Company, or serves or served at any other enterprise as a director, officer or employee at the request of the Company.

Our amended and restated bylaws provide that the Company shall indemnify our directors and officers to the fullest extent not prohibited by the Delaware General Corporation Law or any other law. We are not required to indemnify any director or officer in connection with a proceeding brought by such director or officer unless (i) such indemnification is expressly required by law; (ii) the proceeding was authorized by our board of directors; or (iii) such indemnification is provided by the Company, in its sole discretion, pursuant to the powers vested in the Company under the Delaware General Corporation Law or any other applicable law. In addition, our bylaws provide that the Company may indemnify its employees and other agents as set forth in the Delaware General Corporation Law or any other applicable law.

We have also entered into separate indemnification agreements with our directors and officers that require us, among other things, to indemnify each of them against certain liabilities that may arise by reason of their status or service with the Company or on behalf of the Company, other than liabilities arising from willful misconduct of a culpable nature. The Company is not required to indemnify under the agreement for (i) actions initiated by the director without the authorization of consent of the board of directors; (ii) actions initiated to enforce the indemnification agreement unless the director is successful; (iii) actions resulting from violations of Section 16 of the Exchange Act in which a final judgment has been rendered against the director; and (iv) actions to enforce any non-compete or non-disclosure provisions of any agreement.

The indemnification provided for above provides for reimbursement of all losses of the indemnified party including, expenses, judgment, fines and amounts paid in settlement. The right to indemnification set forth above includes the right for us to pay the expenses (including attorneys' fees) incurred in defending any such proceeding in advance of its final disposition in certain circumstances.

The Delaware General Corporation Law provides that indemnification is permissible only when the director, officer, employee, or agent acted in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the conduct was unlawful. The Delaware General Corporation Law also precludes indemnification in respect of any claim, issue, or matter as to which an officer, director, employee, or agent shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine that, despite such adjudication of liability, but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court deems proper.

We have agreed to indemnify the underwriters and their controlling persons, and the underwriters have agreed to indemnify us and our controlling persons, against certain liabilities, including liabilities under the Securities Act. Reference is made to the Underwriting Agreement filed as part of the exhibits hereto.

See Item 17 for information regarding our undertaking to submit to adjudication the issue of indemnification for violation of the securities laws.

The Registrant maintains insurance policies that provide coverage to its directors and officers against certain liabilities.

Item 16. Exhibits and Financial Statement Schedules.

The exhibits listed in the accompanying Exhibit Index are filed or incorporated by reference as part of this Registration Statement.

Item 17. Undertakings.

- The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) (§230.424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
 - (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (b) The undersigned registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Louis, State of Missouri, on October 23, 2013.

STEREOTAXIS, INC.

By: /s/ William C. Mills

William C. Mills III

Chairman and Interim Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated and on the dates indicated.

| Signature | <u>Title(s)</u> | Date |
|---|--|------------------|
| /s/ William C. Mills III William C. Mills III | Chairman and Interim Chief Executive Officer | October 23, 2013 |
| /s/ Martin C. Stammer Martin C. Stammer | Chief Financial Officer (principal financial officer and principal accounting officer) | October 23, 2013 |
| * David W. Benfer | Director | October 23, 2013 |
| * Joseph D. Keegan | Director | October 23, 2013 |
| * Robert J. Messey | Director | October 23, 2013 |
| * Fred A. Middleton | Director | October 23, 2013 |
| * Eric N. Prystowsky | Director | October 23, 2013 |
| * Euan S. Thomson | Director | October 23, 2013 |
| *By: /s/ Karen W. Duros Karen W. Duros Attorney-in-fact | | |

EXHIBIT INDEX

| Number | Description |
|--------|--|
| 3.1a | Restated Articles of Incorporation of the Registrant, incorporated by reference to Exhibit 3.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended September 30, 2004. |
| 3.1b | Certificate of Amendment to Amended and Restated Certificate of Incorporation, incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K (File No. 000-50884) filed on July 10, 2012. |
| 3.2 | Restated Bylaws of the Registrant, incorporated by reference to Exhibit 3.2 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended September 30, 2004. |
| 4.1 | Form of Specimen Stock Certificate, incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 4.1. |
| 4.2 | Form of PIPE Warrant issued pursuant to that certain Stock and Warrant Purchase Agreement dated May 7, 2012, between the Company and certain purchasers named therein, incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed on May 8, 2012. |
| 4.3 | Form of Subordinated Convertible Debenture issued pursuant to that certain Securities Purchase Agreement dated May 7, 2012, between the Company and each purchaser identified on the signature page thereto, incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed on May 8, 2012. |
| 4.4 | Form of Convertible Debt Warrant issued pursuant to that certain Securities Purchase Agreement dated May 7, 2012, between the Company and each purchaser identified on the signature page thereto, incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed on May 8, 2012. |
| 4.5 | Form of Warrant issued pursuant to that certain Note and Warrant Purchase Agreement effective February 7, 2008, between the Registrant and certain investors named therein (included in Exhibit 10.21a, which is incorporated by reference to Exhibit 10.31 of the Registrant's Form 10-K (File 000-50884) for the fiscal year ending December 31, 2007). |
| 4.6 | Form of Warrant issued pursuant to that certain First Amendment to Note and Warrant Purchase Agreement effective December 29, 2008, between the Registrant and the investors named therein (included in Exhibit 10.21b, which is incorporated by reference to Exhibit 10.32 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2008). |
| 4.7 | Form of Warrant issued pursuant to that certain Second Amendment to Note and Warrant Purchase Agreement effective October 9, 2009, between the Registrant and certain investors named therein (included in Exhibit 10.21c, which is incorporated by reference to Exhibit 10.31c of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2009). |
| 4.8 | Form of Warrant issued pursuant to that certain Third Amendment to Note and Warrant Purchase Agreement effective November 10, 2010, between the Registrant and certain investors named therein (which is incorporated by reference to Exhibit 10.21d of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012). |
| 4.9 | Form of Warrant Issued Pursuant to that Certain Fourth Amendment to Note and Warrant Purchase Agreement dated March 30, 2012, incorporated by reference to Exhibit 4.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended March 31, 2012. |
| 4.10 | Form of Warrant issued pursuant to that certain Fifth Amendment to Note and Warrant Purchase Agreement, dated May 1, 2012, between the Company and certain investors named therein (which is incorporated by reference to Exhibit 10.21f of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012). |

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4.11 Form of Series A Warrant, issued pursuant to that certain Securities Purchase Agreement, dated December 29, 2008, incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed December 29, 2008. Form of Warrant, issued pursuant to that certain Securities Purchase Agreement, dated December 29, 2008, incorporated by reference to 4.12 Exhibit 4.3 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed December 29, 2008. Warrant to Purchase Stock pursuant to that certain Loan and Security Agreement, dated December 17, 2010, between Silicon Valley Bank and 4.13 the Company incorporated by reference to Exhibit 4.10 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2010.). 4.14 Form of Warrant Issued Pursuant to that Certain Eighth Amendment to Note and Warrant Purchase Agreement dated June 28, 2013, among affiliated entities of Sanderling Venture Partners, Alafi Capital Company and the Company, incorporated by reference to Exhibit 4.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2013. Form of Warrant issued pursuant to that certain Exchange and Amendment Agreement, dated August 7, 2013, incorporated by reference to 4.15 Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed August 8, 2013. 4.16* Form of Rights Certificate. 5.1* Opinion of Bryan Cave LLP. 8.1* Opinion of Bryan Cave LLP relating to the U.S. Tax Matters. Stereotaxis, Inc. 2012 Stock Incentive Plan, incorporated by reference to Exhibit 10.1 of Registrant's Form 10-Q (File No. 000-50884) for the 10.1 fiscal quarter ended September 30, 2012. 10.2 2002 Stock Incentive Plan, as amended and restated June 10, 2009, incorporated by reference to Exhibit 10.2 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2009. 10.3 Form of Restricted Share Unit Terms of Award Under Stereotaxis, Inc. 2012 Stock Incentive Plan, Director Award, incorporated by reference to Exhibit 10.1c of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012. Form of Restricted Share Unit Terms of Award Under Stereotaxis, Inc. 2012 Stock Incentive Plan, March 5, 2013, incorporated by reference 10.4 to Exhibit 10.1d of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012. Form of Incentive Stock Option Award Agreement under the 2002 Stock Incentive Plan, incorporated by reference to Exhibit 10.3 of the 10.5 Registrant's Current Report on Form 8-K (File No. 000-50884) filed December 19, 2008. Form of Non-Qualified Stock Option Award Agreement under the 2002 Stock Incentive Plan, incorporated by reference to Exhibit 10.1 of the 10.6 Registrant's Current Report on Form 8-K (File No. 000-50884) filed December 19, 2008. Form of Restricted Stock Agreement under the 2002 Stock Incentive Plan, incorporated by reference to Exhibit 10.7 of the Registrant's Form 10.7 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2008.

Form of Performance Share Agreement under the 2002 Stock Incentive Plan, incorporated by reference to Exhibit 10.8 of the Registrant's

Form of Stock Appreciation Right Award Agreement under the 2002 Stock Incentive Plan, incorporated by reference to Exhibit 10.2 of the

Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2008.

Registrant's Current Report on Form 8-K (File No. 000-50884) filed December 19, 2008.

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10.10 Form of Restricted Share Unit Terms of Award under 2012 Stock Incentive Plan, incorporated by reference to Exhibit 10.2 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended September 30, 2012. 2009 Employee Stock Purchase Plan, as adopted June 10, 2009, incorporated by reference to Exhibit 10.1 of the Registrant's Form 10-Q (File 10.11 No. 000-50884) for the fiscal quarter ended June 30, 2009. 2002 Non-Employee Directors' Stock Plan, as amended and restated May 29, 2008, incorporated by reference to Exhibit 10.4 of the 10.12 Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2008. 10.13 Form of Non-Qualified Stock Option Agreement under the 2002 Non-Employee Directors' Stock Plan, incorporated by reference to Exhibit 10.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2005. 10.14 Form of Restricted Share Unit Agreement, Director Award, under 2002 Stock Incentive Plan, incorporated by reference to Exhibit 10.4c of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012. 10.15 Employment Agreement dated April 17, 2002, between Michael P. Kaminski and the Registrant, incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.8. First Amendment to Employment Agreement dated as of May 29, 2008, by and between the Registrant and Michael P. Kaminski, 10.16 incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed June 3, 2008. Corrected Second Amendment to Employment Agreement dated August 6, 2009, by and between Michael P. Kaminski and the Registrant, 10.17 incorporated by reference to Exhibit 10.3 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2009. Amendment to Executive Employment Agreement dated October 1, 2011 by and between the Company and Michael P. Kaminski, 10.18 incorporated by reference to Exhibit 10.5d of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2011. Employment Agreement dated August 5, 2009, between Daniel J. Johnston and the Registrant, incorporated by reference to Exhibit 10.8 of 10.19 the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2009. Consulting Agreement dated August 5, 2011, by and between the Company and Daniel J. Johnston incorporated by reference to Exhibit 99.2 10.20 of Registrant's Form 8-K (File No. 000-50884) filed on August 8, 2011. 10.21 Form of Executive Employment Agreement between certain executive officers and the Registrant, incorporated by reference to Exhibit 10.7a of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2011. 10.22 Form of Amendment to Executive Employment Agreement between certain executive officers and the Company, incorporated by reference to Exhibit 10.7b of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2011. Summary of management bonus plan, incorporated by reference to Exhibit 10.8 of the Registrant's Form 10-K (File No. 000-50884) for the 10.23 fiscal year ended December 31, 2012.

Summary of annual cash compensation of named executive officers, incorporated by reference to Exhibit 10.9 of the Registrant's Form 10-K

Summary of Non-Employee Directors' Compensation, incorporated by reference to Exhibit 10.10 of the Registrant's Form 10-K (File No.

(File No. 000-50884) for the fiscal year ended December 31, 2012.

000-50884) for the fiscal year ended December 31, 2012.

- Stereotaxis Advisory Board and Consulting Agreement, dated February 25, 2009, between the Company and Eric N. Prystowsky, MD, 10.26 incorporated by reference to Exhibit 10.3 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended March 31, 2009. Amendment to Stereotaxis Advisory Board and Consulting Agreement, dated February 15, 2010, between the Company and Eric N. 10.27 Prystowsky, MD incorporated by reference to Exhibit 10.11 b of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2010. Stereotaxis Advisory Board and Consulting Agreement, dated February 25, 2011, between the Company and Eric N. Prystowsky, MD 10.28 incorporated by reference to Exhibit 10.2 the Registrant's Form 10-Q (File No. 000-50884) filed for the fiscal quarter ended March 31, 2011. 10.29 Collaboration Agreement dated June 8, 2001, between the Registrant and Siemens AG, Medical Solutions, incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.9. 10.30 Extended Collaboration Agreement dated May 27, 2003, between the Registrant and Siemens AG, Medical Solutions, incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.10. Amendment to Collaboration Agreement dated May 5, 2006, between the Company and Siemens Aktiengesellschaft, Medical Solutions, 10.31 incorporated by reference to Exhibit 10.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2006. Development and Supply Agreement dated May 7, 2002, between the Registrant and Biosense Webster, Inc., incorporated by reference to the 10.32 Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.11. Amendment to Development and Supply Agreement dated November 3, 2003, between the Registrant and Biosense Webster, Inc., 10.33 incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.12. Alliance Expansion Agreement, dated as of May 4, 2007, between Biosense Webster, Inc. and the Registrant, incorporated by reference to 10.34 Exhibit 10.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended June 30, 2007. 10.35 Second Amendment to Development Alliance and Supply Agreement, dated as of July 18, 2008, between the Registrant and Biosense Webster, Inc., incorporated by reference to Exhibit 10.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended September 30, 2008. 10.36 Third Amendment to Development Alliance and Supply Agreement with Biosense Webster, Inc. effective as of December 21, 2009, incorporated by reference to Exhibit 10.22 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2009. Fourth Amendment to Development Alliance and Supply Agreement with Biosense Webster, Inc., effective May 1, 2010, incorporated by 10.37 reference to Exhibit 10.1 of the Registrant's Form 10-Q (File No. 000-50884) for the fiscal quarter ended March 31, 2010. Fifth Amendment to Development Alliance and Supply Agreement with Biosense Webster, Inc., dated as of July 30, 2010, incorporated by 10.38
- reference to Exhibit 10.1 of the Registrant's Form 8-K/A (File No. 000-50884) filed on August 3, 2010.
- Sixth Amendment and Catheter and Mapping System Extension to Development Alliance and Supply Agreement with Biosense Webster, 10.39 Inc., dated January 3, 2011, effective as of December 17, 2010 incorporated by reference to Exhibit 10.13h of the Registrant's Form 10-K (File No. 000-50884) filed for the fiscal year ended December 31, 2010).

- 10.40 Seventh Amendment to the Development Alliance and Supply Agreement with Biosense Webster, Inc., effective December 5, 2011 incorporated by reference to Exhibit 10.13i of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2011. Form of Indemnification Agreement between the Registrant and its directors and executive officers, incorporated by reference to the 10.41 Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.14. 10.42 Letter Agreement, effective October 6, 2003, between the Registrant and Philips Medizin Systeme G.m.b.H., incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.16. 10.43 Japanese Market Development Agreement dated May 18, 2004, between the Registrant, Siemens Aktiengesellschaft and Siemens Asahi Medical Technologies Ltd., incorporated by reference to the Registration Statement on Form S-1 (File No. 333-115253) originally filed with the Commission on May 7, 2004, as amended thereafter, at Exhibit 10.32. 10.44 Office Lease dated November 15, 2004, between the Registrant and Cortex West Development I, LLC, incorporated by reference to Exhibit
- 10.39 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2004.
- 10.45 Amendment to Office Lease dated November 30, 2007, between the Registrant and Cortex West Development I, LLC, incorporated by reference to Exhibit 10.22 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2007.
- Second Amended and Restated Loan and Security Agreement, effective November 30, 2011, by and among the Company, Stereotaxis 10.46 International, Inc. and Silicon Valley Bank, incorporated by reference to Exhibit 10.120e of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012.
- 10.47 Waiver Agreement between the Company, Stereotaxis International, Inc. and Silicon Valley Bank dated February 29, 2012, incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K (File No. 000-50884) filed on March 5, 2012.
- 10.48 First Loan Modification Agreement (Domestic), between the Company, Stereotaxis International, Inc. and Silicon Valley Bank, dated March 30, 2012, incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K (File No. 000-50884) filed on April 2, 2012.
- Second Amendment to the Amended and Restated Loan and Security Agreement (Domestic) dated May 1, 2012, between the Company, 10.49 Stereotaxis International, Inc. and Silicon Valley Bank, incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed on May 2, 2012.
- 10.50 Third Amendment to Amended and Restated Loan and Security Agreement (Domestic), dated May 7, 2012, between the Company, Stereotaxis International, Inc. and Silicon Valley Bank, incorporated by reference to Exhibit 10.75 of the Registrant's Registration Statement on Form S-1 (File No. 000-50884) filed May 23, 2012.
- Fourth Loan Modification Agreement (Domestic), dated December 28, 2012, between the Company, Stereotaxis International, Inc. and 10.51 Silicon Valley Bank, incorporated by reference to Exhibit 10.19f to the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012.
- Amended and Restated Export-Import Bank Loan and Security Agreement effective November 30, 2011, among the Company, Stereotaxis 10.52 International, Inc. and Silicon Valley Bank, incorporated by reference to Exhibit 10.20e of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012.
- Fifth Loan Modification Agreement (Domestic), dated March 29, 2013, between Silicon Valley Bank, the Company, and Stereotaxis 10.53 International, Inc., incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed April 1, 2013.
- Export-Import Bank First Loan Modification Agreement, between the Company, Stereotaxis International, Inc. and Silicon Valley Bank, dated 10.54 March 30, 2012, incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K (File No. 000-50884) filed on April 2, 2012.

December 31, 2010.

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10.55 Export-Import Bank Second Loan Modification and Waiver Agreement, dated May 1, 2012, between the Company, Stereotaxis International, Inc. and Silicon Valley Bank, incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed on May 2, 2012. 10.56 Export-Import Bank Third Loan Modification and Waiver Agreement, dated May 7, 2012, between the Company, Stereotaxis International, Inc. and Silicon Valley Bank, incorporated by reference to Exhibit 10.76 of the Registrant's Registration Statement on Form S-1 (File No. 000-50884) filed May 23, 2012. 10.57 Export-Import Bank Fourth Loan Modification and Waiver Agreement, dated March 29, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc., incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed April 1, 2013. 10.58 Sixth Loan Modification and Waiver Agreement (Domestic), dated June 28, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc., incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed July 1. 2013. 10.59 Export-Import Bank Fifth Loan Modification Agreement, dated June 28, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc., incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed July 1, 2013. 10.60 Export-Import Bank Sixth Loan Modification Agreement, dated July 31, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc., incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed August 2, 2013. 10.61 Seventh Loan Modification and Waiver Agreement (Domestic), dated July 31, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc., incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed August 2, 2013. 10.62 Eighth Loan Modification Agreement (Domestic), dated August 30, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc., incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed September 3, 2013. 10.63 Export-Import Bank Seventh Loan Modification Agreement, dated August 30, 2013, between Silicon Valley Bank, the Company and Stereotaxis International, Inc. incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed September 3, 2013. Note and Warrant Purchase Agreement, effective February 7, 2008, between the Registrant and the investors named therein, incorporated by 10.64 reference to Exhibit 10.31 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2007. First Amendment to Note and Warrant Purchase Agreement, effective December 29, 2008, between the Registrant and the investors named 10.65 therein, incorporated by reference to Exhibit 10.32 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2008. 10.66 Second Amendment to Note and Warrant Purchase Agreement, effective October 9, 2009, between the Registrant and the investors named therein, incorporated by reference to Exhibit 10.31c of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2009. 10.67 Third Amendment to Note and Warrant Purchase Agreement, effective November 10, 2010, between the Registrant and the investors named

therein incorporated by reference to Exhibit 10.21d of the Registrant's Form 10-K (File No. 000-50884) filed for the fiscal year ended

2012, incorporated by reference to Exhibit 10.3 of the Registrant's Form 8-K (File No. 000-50884) filed on April 2, 2012.

Fourth Amendment to the Note and Warrant Purchase Agreement between the Registrant and the investors named therein, dated March 30,

| 10.69 | Fifth Amendment to Note and Warrant Purchase Agreement, dated May 1, 2012, between the Registrant and the investors named therein, incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed on May 2, 2012. |
|-------|---|
| 10.70 | Sixth Amendment to Note and Warrant Purchase Agreement, dated May 7, 2012, between the Registrant and the investors named therein, incorporated by reference to Exhibit 10.77 of the Registrant's Registration Statement on Form S-1 (File No. 000-50884) filed May 23, 2012. |
| 10.71 | Seventh Amendment to Note and Warrant Purchase Agreement, dated March 29, 2013, among affiliated entities of Sanderling Venture Partners, Alafi Capital Company and the Company, incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed April 1, 2013. |
| 10.72 | Eighth Amendment to Note and Warrant Purchase Agreement, dated June 28, 2013, among affiliated entities of Sanderling Venture Partners, Alafi Capital Company and the Company, incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed July 1, 2013. |
| 10.73 | First Amendment to Note and Warrant Purchase Agreement, effective December 29, 2008, between the Registrant and the investors named therein, incorporated by reference to Exhibit 10.32 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2008. |
| 10.74 | Second Amendment to Note and Warrant Purchase Agreement, effective October 9, 2009, between the Registrant and the investors named therein, incorporated by reference to Exhibit 10.31c of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2009. |
| 10.75 | Third Amendment to Note and Warrant Purchase Agreement, effective November 10, 2010, between the Registrant and the investors named therein incorporated by reference to Exhibit 10.21d of the Registrant's Form 10-K (File No. 000-50884) filed for the fiscal year ended December 31, 2010. |
| 10.76 | Loan Agreement dated as of November 30, 2011, by and among the Company, Stereotaxis International, Inc. and Cowen Healthcare Royalty Partners II LLC, incorporated by reference to Exhibit 10.22a of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012. |
| 10.77 | Intercreditor Agreement dated as of December 5, 2011 by and among the Company, Stereotaxis International, Inc., Cowen Healthcare Royalty Partners II LLC and Silicon Valley Bank, incorporated by reference to Exhibit 10.22b of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2012. |
| 10.78 | Form of Amendment and Exchange Agreement, dated August 7, 2013, incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 000-50884) filed August 8, 2013. |
| 21.1 | List of Subsidiaries of the Registrant, incorporated by reference to Exhibit 21.1 of the Registrant's Form 10-K (File No. 000-50884) for the fiscal year ended December 31, 2009. |
| 23.1 | Consent of Ernst & Young LLP |
| 23.2* | Consent of Bryan Cave LLP (included in Exhibit 5.1) |
| 99.1* | Form of Instructions for Use of Stereotaxis, Inc. Subscription Rights Certificates |
| 99.2* | Form of Notice of Guaranteed Delivery |
| 99.3* | Form of Letter to Shareholders who are Record Holders |
| 99.4* | Form of Letter to Shareholders who are Beneficial Holders |
| 99.5* | Form of Letter to Clients |
| 99.6* | Form of Beneficial Owner Election Form |
| 00.7* | Form of Naminas Holder Cortification |

^{*} Previously filed.

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Pre-Effective Amendment No. 2 to the Registration Statement on Form S-1 (No. 333-191054) and related Prospectus of Stereotaxis, Inc. for the registration of up to 6,315,953 shares of its common stock, \$0.001 par value and to the incorporation by reference therein of our report dated April 1, 2013, with respect to the financial statements and schedule of Stereotaxis, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2012, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

St. Louis, Missouri October 23, 2013