September 7, 2006

Mail Stop 6010

Frederic H. Moll, M.D.
Chief Executive Officer
Hansen Medical, Inc.
380 North Bernardo Avenue
Mountain View, CA 94043

Re: Hansen Medical, Inc.
Registration Statement on Form S-1
Filed August 16, 2006
File No. 333-136685

Dear Mr. Moll:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form S-1

1. Please confirm that any preliminary prospectus you circulate will include all non-Rule 430A information. This includes the price range and related information based on a bona fide estimate of the public offering price within that range, and other information that was left blank throughout the document. Also, note that we may have additional comments after you file this information.

Artwork

2. The print on the explanatory legend at the bottom of the page should be larger, and it should make clear that you have not received FDA approval. Also, the legend should appear on each page picturing your products.

Summary, page 1

3. In the first paragraph, explain in more detail what it means to "instinctively navigate" catheters.

4. Revise to disclose, if known, what percentage of the "millions" of interventional diagnostic and therapeutic procedures worldwide is represented by heart mapping procedures.

5. Please provide us with copies of the publications you have relied on for the industry data cited throughout your prospectus. Please clearly mark the relevant sections that support the data you have included in your prospectus and the corresponding prospectus page number where such data has been used.

6. Expand the summary to disclose the extent to which you have or have not conducted clinical trials and the number of patients that have been treated using your technology, along with the bases for your beliefs regarding the benefits your technology will offer to patients.

Summary Financial Data, page 6

7. We see that the pro forma data in your filing is not complete. We will review this pro forma data once you complete the disclosures.

Risk Factors, page 8

We may incur significant liability if it is determined that we are promoting off-label use…, page 11

8. We note your disclosure that you are currently seeking FDA approval for your Sensei system and Artisan control catheters solely for use in mapping heart anatomy using two specific mapping catheters. Your disclosure on page 53, however, seems to indicate that in addition to your pending 510(k) applications for your Sensei system and Artisan control catheter, the FDA is reviewing your 510(k) premarket notification for your Elite transseptal system as well. Please clarify as appropriate.

9. We note your statement that your "business and future growth" will depend on the off-label use of your Sensei system. Revise your disclosure to clarify why you have elected to seek FDA approval only for use in mapping heart anatomy, and not for the treatment of atrial fibrillation and other cardiovascular procedures.

Our reliance on third-party manufacturers…, page 15

10. If you have an agreement with Maxon Motors AG, please file it as an exhibit or tell us why you have not filed it.

If we fail to obtain or acquire imaging and visualization technology…, page 16

11. Please expand your disclosure to describe how you currently provide imaging and visualization technology, if any, for use with your Sensei system.

Hospitals or physicians…, page 17

12. Revise to address the extent to which third-party payors will reimburse hospitals and physicians for off-label use.

Dilution, page 37

13. Expand to state how the numbers and percentages would change in the chart on page 37 if you assume all outstanding options and warrants are exercised.

Business, page 49

14. Please revise to clarify the meaning of your statement that you develop and manufacture a "new generation" of medical robotics and explain briefly how your system compares to the existing generation, if any, of medical robotics.

15. Revise your disclosure to clarify, if true, that any planned expansion of uses for your technology will require separate FDA approval from that which you are currently seeking.

16. Revise to address briefly the basis for your belief that your Sensei system is "easy and instinctive" for physicians to use. Address whether your belief has been demonstrated in clinical trials.

17. Please tell us whether Millennium Research Group:

- makes its reports publicly available,
- received compensation from you for preparation of the statistics,
- prepared the statistics for use in the registration statement, or
- has consented to your use of their statistics in your document.

Research and Development, page 59

18. Expand to discuss in reasonable detail the extent to which your device has been tested on human patients.

Force Dimension Development and Supply Agreement, page 62

19. Tell us why you have not filed your Development and Supply Agreement with Force Dimension Sarl as an exhibit.

Reimbursement, page 62

20. Revise to address whether you expect third-party payors will reimburse hospitals and physicians for procedures performed through off-label uses of your product.

Management, page 72

21. We note that several of your directors are affiliated with various venture capital firms. With a view towards revised disclosure, please tell us whether any of these directors holds, through his interest in his venture capital firm or otherwise, any significant interests in any other company that may or will compete with you. If so, describe any procedures in place to resolve any potential conflicts of interest.

Underwriting, page 103

22. Tell us why you have not filed your lock-up agreement as an exhibit.

Report of Independent Registered Public Accounting Firm, page F-2

23. We note that your auditors did not audit the cumulative balance from the date of inception (September 23, 2002) through December 31, 2005. An auditor's association with the cumulative data is required on an annual basis as long as you are in the development stage. Revise to include an auditor's report clearly identifying this period as audited or discuss why you believe no audit is necessary.

Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit, page F-5

24. Please revise to provide details of the date and per share price of each stock issuance as required by paragraph 11 of SFAS 7. Alternatively, please tell us how your current disclosure meets the requirements of paragraph 11 or why such disclosure is not required.

Note 4. Asset Purchase, page F-17

25. Please revise to disclose the basis for determining the value of the 2,268,986 shares of Series B redeemable convertible preferred stock issued as part of the asset acquisition of endoVia Medical.

Note 5. Commitments and Contingencies, page F-18

26. Please provide support for the method you used to value the shares issued as part of the license agreements entered into with Mitsubishi, Nidus, and Intuitive. Also, revise to quantify the milestones and royalty amounts associated with each of these agreements.

Note 8. Redeemable Convertible Preferred Stock, page F-20

27. We note that you currently have three classes of preferred stock outstanding. To help us better understand your classification and accounting for each class of preferred stock, please address the following:

- Please clearly describe the material terms of all related agreements, such as registration rights agreements. Include any circumstances under which you may be required to pay penalties.
- Describe clearly how you have accounted for each class of convertible preferred stock, including any embedded derivatives requiring bifurcation pursuant to SFAS 133 and EITF 00-19.

In this regard, as applicable, please refer to the guidance provided in SFAS 150, EITF 05-04, EITF 00-19 and the Division of Corporation Finance's Current Accounting and Disclosure Issues Outline at http://www.sec.gov/divisions/corpfin/acctdis120105.pdf.

Note 9. Stockholders' Deficit page F-22

28. Provide us with an itemized chronological schedule detailing each issuance of your preferred stock, stock options and warrants since September 2005 through the date of your response. Include the following information for each issuance or grant date:

- Number of shares issued or issuable in the grant
- Purchase price or exercise price per share
- Any restriction or vesting terms
- Management's fair value per share estimate
- How management determined the fair value estimate
- Identity of the recipient and relationship to the company
- Nature and terms of any concurrent transactions with the recipient
- Amount of any recorded compensation element and accounting literature relied upon to support the accounting.

In the analysis requested above, highlight any transactions with unrelated parties believed by management to be particularly evident of an objective fair value per share determination. Please provide us with a chronological bridge of management's fair value per share determinations to the current estimated IPO price per share. Also, indicate when discussions were initiated with your underwriter(s) about possible offering price ranges. We will delay our assessment of your response pending inclusion of the estimated IPO price in the filing.

Part II

Exhibit 23.1

29. An updated accountant's consent should be included with any amendment to the filing. Also, consideration should be given on an ongoing basis to the updating requirements of Rule 3-12 of Regulation S-X.

Item 17. Undertakings, page II-5

30. Please include the undertakings required by item 512(a)(5)(ii) and 512(a)(6) of Regulation S-K. Refer to Rule 430C(d) and Rule 424(b)(3).

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are

aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kevin Kuhar at (202) 551-3662 or Angela Crane at (202) 551-3554 if you have questions regarding comments on the financial statements and related matters. Please contact Eduardo Aleman at (202) 551-3646 or me at (202) 551-3646 with any other questions.

Sincerely,

Peggy Fisher
Assistant Director

cc(via facsimile): Laura Berezin, Cooley Godward LLP