UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

Current Report

Pursuant to Section 13 or 15(d) of the

Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 20, 2007

HOLOGIC, INC.

(Exact Name of Registrant as Specified in Its Charter)

DELAWARE

(State or Other Jurisdiction of Incorporation)

0-18281 (Commission File Number) 04-2902449 (I.R.S. Employer Identification No.)

35 Crosby Street, Bedford, MA (Address of Principal Executive Offices)

01730 (Zip Code)

(781) 999-7300

(Registrant s Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- x Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- x Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- " Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- " Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 1.01 ENTRY INTO A MATERIAL DEFINITIVE AGREEMENT

Merger Agreement

On May 20, 2007, Hologic, Inc., a Delaware corporation (**Hologic**), entered into an Agreement and Plan of Merger (the **Merger Agreement**) with Cytyc Corporation, a Delaware corporation (**Cytyc**), and Nor easter Corp., a Delaware corporation and wholly owned subsidiary of Hologic (**Merger Sub**). The Merger Agreement provides that, upon the terms and subject to the conditions set forth in the Merger Agreement, Cytyc will merge with and into MergerSub, with MergerSub continuing as the surviving corporation under the name Cytyc Corporation and as a wholly owned subsidiary of Hologic.

Subject to the terms and conditions of the Merger Agreement, which has been unanimously approved by the boards of directors of both companies, at the effective time and as a result of the merger, each share of common stock of Cytyc, par value \$0.01 per share, issued and outstanding immediately prior to the effective time of the merger will be cancelled and converted into the right to receive a combination of (i) 0.52 shares of common stock, par value \$0.01 per share, of Hologic, and (ii) \$16.50 in cash. Based on Hologic s closing stock price (as reported on the Nasdaq Global Select Market) of \$57.61 per share on May 18, 2007, the transaction represents \$46.46 per Cytyc share, or total consideration of approximately \$6.2 billion.

Under the agreement, Cytyc shareholders will receive an aggregate of an estimated 69 million shares of Hologic common stock and \$2.2 billion in cash, assuming the conversion of Cytyc s outstanding convertible notes. Hologic has secured fully committed debt financing for the cash portion of the consideration from Goldman, Sachs & Co. Hologic plans to issue permanent financing for the transaction around the time of closing through a combination of prepayable debt and equity-linked financing.

Hologic and Cytyc have made customary representations, warranties and covenants in the Merger Agreement, including, among others, covenants (a) to conduct their respective businesses in the ordinary course consistent with past practice during the interim period between the date of the execution of the Merger Agreement and the consummation of the merger, (b) not to engage in certain kinds of transactions during such period, (c) use commercially reasonable efforts to convene and hold a meeting of their respective stockholders to consider and vote upon the approval of the transaction and (d) that, subject to certain exceptions, the boards of directors of Hologic and Cytyc will each recommend that their respective stockholders approve the transaction. Each party has also agreed not to (i) solicit proposals relating to alternative business combination transactions or (ii) subject to certain exceptions, enter into discussions or an agreement concerning or provide confidential information in connection with any proposals for alternative business combination transactions.

Consummation of the merger is subject to customary conditions, including (a) approval of the transaction by the common stockholders of both Hologic and Cytyc in accordance with Delaware law and the requirements of the Nasdaq Stock Market, (b) absence of any applicable law prohibiting the merger, (c) expiration or termination of the Hart-Scott-Rodino Act waiting period and certain other regulatory approvals, (d) subject to certain exceptions, the accuracy of the representations and warranties of each party, (e) performance in all material respects of each party of its obligations under the Merger Agreement and (f) the delivery of customary opinions from counsel to Hologic and counsel to Cytyc to the effect that the receipt of stock merger consideration by Cytyc stockholders will be a tax-free reorganization for federal income tax purposes, subject to the exceptions provided therein.

Under the Merger Agreement, upon completion of the Merger, John W. Cumming, Chief Executive Officer of Hologic, will become Chief Executive Officer of the combined company, and Patrick J. Sullivan, Chairman, Chief Executive Officer and President of Cytyc, will become Chairman of the combined company. The combined company s board of directors will be comprised of eleven members, with six nominated by Hologic and five nominated by Cytyc.

The Merger Agreement contains certain termination rights for both Hologic and Cytyc and further provides that, upon termination of the Merger Agreement under specified circumstances, Cytyc may be required to pay Hologic a termination fee of \$50,000,000 or \$150,000,000 or Hologic may be required to pay Cytyc a termination fee of \$33,000,000 or \$100,000,000, in each case, depending on the termination event.

The Merger Agreement is filed as Exhibit 2.1 hereto and is hereby incorporated into this report by reference. The Merger Agreement, which has been included to provide investors with information regarding its terms, contains representations and warranties of each of Hologic and Cytyc. The assertions embodied in those representations and warranties were made for purposes of the Merger Agreement and are subject to qualifications and limitations agreed to by the respective parties in connection with negotiating the terms of the Merger Agreement. In addition, certain representations and warranties were made as of a specific date, may be subject to a contractual standard of materiality different from what might be viewed as material to stockholders, or may have been used for purposes of allocating risk between the respective parties rather than establishing matters as facts. Investors should read the Merger Agreement together with the other information concerning Hologic and Cytyc that each company publicly files in reports and statements with the Securities and Exchange Commission (the SEC).

Waiver Letters; Retention Agreement

In connection with entering into the Merger Agreement, Hologic and each of John W. Cumming, Chief Executive Officer of Hologic, Robert A. Cascella, President of Hologic and Glenn P. Muir, Chief Financial Officer of Hologic executed a waiver letter dated May 20, 2007 (the Waiver Letter). In the Waiver Letter, each of Messrs. Cumming, Cascella and Muir agreed to waive, solely with respect to the Merger, the change of control payment and special bonus each of them would have been entitled to receive under their Amended and Restated Change of Control Agreements dated October 30, 2006, and the accelerated vesting under certain of the stock options and restricted stock units, that would otherwise result from the completion of the Merger, under relevant provisions in each of their Amended and Restated Change of Control Agreements and stock incentive plans and award agreements under which their stock options and restricted stock units have been issued. These waivers are subject to the officer continuing to be retained by Hologic for a period of two years following the merger. The Waiver Letters for each of Messrs. Cumming, Cascella and Muir are filed as Exhibits 10.1, 10.2 and 10.3 hereto and such exhibits are hereby incorporated into this report by reference. In connection with Mr. Cascella is Waiver Letter, Hologic and Mr. Cascella also agreed to the principal terms of a three year retention agreement, which would become effective upon and is subject to the consummation of the Merger. A summary of the principal terms of the proposed retention agreement with Mr. Cascella is filed as Exhibit 10.4 hereto and such exhibit is incorporated into this report by reference.

Retention and Severance Agreements; Change of Control Agreements

In connection with entering into the Merger Agreement, Hologic entered into retention and severance agreements and change of control agreement with each of Patrick J. Sullivan, current Chairman, President and Chief Executive Officer of Cytyc, and Daniel J. Levangie, current President of Cytyc Surgical Product, which would become effective upon and are subject

to the consummation of the Merger. The retention and severance agreements and change of control agreements for each of Messrs. Sullivan and Levangie, are filed hereto as Exhibits 10.5, 10.6, 10.7 and 10.8, and such exhibits are incorporated into this report by reference.

Disclaimer Regarding Forward-Looking Statements

Information set forth in this communication contains forward-looking statements, which involve a number of risks and uncertainties. Such forward-looking statements include, but are not limited to, statements about the timing of the completion of the transaction, the anticipated benefits of the business combination transaction involving Hologic and Cytyc, including future financial and operating results, the expected permanent financing for the transaction, the combined company s plans, objectives, expectations and intentions and other statements that are not historical facts. Hologic and Cytyc caution readers that any forward-looking information is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking information.

These include risks and uncertainties relating to: the ability to obtain regulatory approvals of the transaction on the proposed terms and schedule; the parties may be unable to complete the transaction because conditions to the closing of the transaction may not be satisfied; the risk that the businesses will not be integrated successfully; the transaction may involve unexpected costs or unexpected liabilities; the risk that the cost savings and any other synergies from the transaction may not be fully realized or may take longer to realize than expected; disruption from the transaction making it more difficult to maintain relationships with customers, employees or suppliers; competition and its effect on pricing, spending, third-party relationships and revenues; the need to develop new products and adapt to significant technological change; implementation of strategies for improving internal growth; use and protection of intellectual property; dependence on customers capital spending policies and government funding policies, including third-party reimbursement; realization of potential future savings from new productivity initiatives; general worldwide economic conditions and related uncertainties; future legislative, regulatory, or tax changes as well as other economic, business and/or competitive factors; and the effect of exchange rate fluctuations on international operations. In addition, the transaction will require the combined company to obtain significant financing. While Hologic has obtained a commitment to obtain such financing, including a bridge to the permanent financing contemplated in the press release, the combined company s liquidity and results of operations could be materially adversely affected if such financing is not available on favorable terms. Moreover, the substantial leverage resulting from such financing will subject the combined company s business to additional risks and uncertainties. The risks included above are not exhaustive. The annual reports on Form 10-K, the quarterly reports on Form 10-Q, current reports on Form 8-K and other documents Hologic and Cytyc have filed with the SEC contain additional factors that could impact the combined company s businesses and financial performance. The parties expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any such statements to reflect any change in the parties expectations or any change in events, conditions or circumstances on which any such statement is based.

Important Information for Investors and Stockholders

Hologic and Cytyc will file a joint proxy statement/prospectus with the SEC in connection with the proposed merger. Hologic and Cytyc urge investors and stockholders to read the joint proxy statement/prospectus when it becomes available and any other relevant documents filed by either party with the SEC because they will contain important information.

Investors and stockholders will be able to obtain the joint proxy statement/prospectus and other documents filed with the SEC free of charge at the website maintained by the SEC at

www.sec.gov. In addition, documents filed with the SEC by Hologic will be available free of charge on the investor relations portion of the Hologic website at www.hologic.com. Documents filed with the SEC by Cytyc will be available free of charge on the investor relations portion of the Cytyc website at www.cytyc.com.

Participants in the Solicitation

Hologic, and certain of its directors and executive officers, may be deemed participants in the solicitation of proxies from the stockholders of Hologic in connection with the merger. The names of Hologic s directors and executive officers and a description of their interests in Hologic are set forth in the proxy statement for Hologic s 2006 annual meeting of stockholders, which was filed with the SEC on January 25, 2007. Cytyc, and certain of its directors and executive officers, may be deemed to be participants in the solicitation of proxies from its stockholders in connection with the merger. The names of Cytyc s directors and executive officers and a description of their interests in Cytyc is set forth in Cytyc s Annual Report on Form 10-K/A for the fiscal year ended December 31, 2006, which was filed with the SEC on April 30, 2007. Investors and stockholders can obtain more detailed information regarding the direct and indirect interests of Hologic s and Cytyc s directors and executive officers in the merger by reading the definitive joint proxy statement/prospectus when it becomes available.

ITEM 5.02 DEPARTURE OF DIRECTORS OR CERTAIN OFFICERS; ELECTION OF DIRECTORS; APPOINTMENT OF CERTAIN OFFICERS: COMPENSATORY ARRANGEMENTS OF CERTAIN OFFICERS

(e) The information contained in Item 1.01 of this Current Report on Form 8-K is incorporated by reference herein.

ITEM 9.01 FINANCIAL STATEMENTS AND EXHIBITS.

(d) Exhibits.

The following Exhibits are filed as part of this report:

| EXHIBIT NO. 2.1 | DESCRIPTION Agreement and Plan of Merger by and among Hologic, Inc., Nor easter Corp. and Cytyc Corporation, dated as of May 20, 2007 |
|-----------------|--|
| 10.1 | John W. Cumming Waiver Letter dated as of May 20, 2007 |
| 10.2 | Robert A. Cascella Waiver Letter dated as of May 20, 2007 |
| 10.3 | Glenn P. Muir Waiver Letter dated as of May 20, 2007 |
| 10.4 | Principal Terms of Proposed Retention Agreement with Robert A. Cascella |
| 10.5 | Retention and Severance Agreement with Patrick J. Sullivan dated as of May 20, 2007 |
| 10.6 | Change of Control Agreement with Patrick J. Sullivan dated as of May 20, 2007 |
| 10.7 | Retention and Severance Agreement with Daniel J. Levangie dated as of May 20, 2007 |
| 10.8 | Change of Control Agreement with Daniel J. Levangie dated as of May 20, 2007 |
| | |

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: May 21, 2007 HOLOGIC, INC.

By: /s/ Glenn P. Muir Glenn P. Muir, Chief Financial Officer, Executive Vice President, Finance and Treasurer

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