HOLOGIC INC Form S-4/A September 07, 2007 Table of Contents

As filed with the Securities and Exchange Commission on September 7, 2007

Registration No. 333-144238

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 2 to

Form S-4

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

HOLOGIC, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of 3844 (Primary Standard 04-2902449 (I.R.S. Employer

Incorporation or Organization)

Industrial Classification Code Number)
35 Crosby Drive, Bedford, Massachusetts 01730

Identification No.)

Telephone: (781) 999-7300

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant s Principal Executive Offices)

Glenn P. Muir

Executive Vice President

Finance and Administration

35 Crosby Drive, Bedford, Massachusetts 01730

Telephone: (781) 999-7300

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

Copies to:

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Senior Vice President,

General Counsel and Secretary

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Washington, D.C. 2004

(617) 856-8200

(202) 637-5600

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, 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, 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.

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, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this joint proxy statement/prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This joint proxy statement/prospectus is not an offer to sell and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY SUBJECT TO COMPLETION, DATED SEPTEMBER 7, 2007

MERGER PROPOSED YOUR VOTE IS VERY IMPORTANT

The boards of directors of Hologic, Inc., or Hologic, and Cytyc Corporation, or Cytyc, have approved a business combination of the two companies pursuant to the terms of an Agreement and Plan of Merger dated as of May 20, 2007. Pursuant to the terms of the merger agreement, Cytyc will be merged into a wholly owned subsidiary of Hologic. Following the completion of the merger, Cytyc stockholders will own approximately 55% of the outstanding common stock of the combined company and Hologic stockholders will own approximately 45% of the outstanding common stock of the combined company.

The combined company will be named Hologic, Inc., and the shares of the combined company will be traded on the Nasdaq Global Select Market, under the symbol HOLX.

Under the terms of the merger agreement, Cytyc s stockholders will receive 0.52 of a share of Hologic common stock and \$16.50 in cash for each share of Cytyc common stock. Cytyc stockholders will receive cash for any fractional shares which they would otherwise receive in the merger. Hologic stockholders will continue to own their existing shares after the merger. Hologic common stock is traded on the Nasdaq Global Select Market under the symbol HOLX. On [], 2007, the last practicable day before the mailing of this joint proxy statement/prospectus, the closing price per share of Hologic common stock as reported by the Nasdaq Global Select Market was \$[].

YOUR VOTE IS IMPORTANT. The merger cannot be completed unless, among other things, Cytyc stockholders adopt the merger agreement, and Hologic stockholders approve an amendment to Hologic s certificate of incorporation, which we refer to as the Hologic charter, and approve the issuance of Hologic common stock to Cytyc stockholders in the merger.

The Hologic board of directors unanimously recommends that Hologic stockholders vote FOR the amendment to the Hologic charter to increase the number of authorized shares of Hologic common stock and FOR the issuance of Hologic common stock to Cytyc stockholders in the merger. The Cytyc board of directors unanimously recommends that Cytyc stockholders vote FOR the adoption of the merger agreement and the transactions contemplated thereby, including the merger.

Hologic and Cytyc will each hold a special meeting of their respective stockholders to vote on these proposals. Whether or not you plan to attend your company s special meeting, please take the time to vote by completing and mailing the enclosed proxy card or submitting your proxy by telephone or through the Internet using the procedures in the proxy voting instructions included with your proxy card. Even if you return the proxy, you may attend your company s special meeting and vote your shares in person.

This joint proxy statement/prospectus describes the proposed merger and related transactions in more detail. Hologic and Cytyc encourage you to read the entire joint proxy statement/prospectus carefully, including the merger agreement, which is attached as Annex A, and the section entitled <u>Risk Factors</u> beginning on page 26.

We strongly support the combination of our companies and join with our respective boards of directors in recommending that you vote in favor of the proposals presented in this joint proxy statement/prospectus.

Sincerely, Sincerely,

John W. Cumming Patrick J. Sullivan

Chairman and Chief Executive Officer Chairman, Chief Executive Officer and President

HOLOGIC, INC. CYTYC CORPORATION

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued under this joint proxy statement/prospectus or determined if this joint proxy statement/prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated [], 2007 and, together with the accompanying proxy card, is first being mailed or otherwise distributed to stockholders of Hologic and Cytyc on or about [], 2007.

THIS JOINT PROXY STATEMENT/PROSPECTUS INCORPORATES

ADDITIONAL INFORMATION

Hologic

This joint proxy statement/prospectus incorporates by reference important business and financial information about Hologic from other documents filed with the Securities and Exchange Commission, which is referred to as the SEC, that are not included in or delivered with this joint proxy statement/prospectus. This information is available to you without charge upon your written or oral request. For a list of the documents incorporated by reference into this joint proxy statement/prospectus, see Where You Can Find More Information beginning on page 197. You can obtain the documents that are incorporated by reference into this joint proxy statement/prospectus, without charge, from the Investor Relations section of Hologic s website at www.hologic.com or by requesting them in writing or by telephone as set forth below:

By Mail: Hologic, Inc.

35 Crosby Drive Bedford, MA 01730

By Telephone: (781) 999-7300

If you would like to request any documents, please do so by [], 2007 in order to receive them before the Hologic special meeting.

Cytyc

Cytyc is subject to the informational filing requirements of the Securities Exchange Act of 1934, as amended, which is referred to as the Exchange Act, and, in accordance therewith, is obligated to file reports, proxy statements and other information with the SEC relating to its business, financial condition and other matters. The information filed by Cytyc with the SEC may be inspected at the SEC s public reference library at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Copies of such information may be obtained by mail, upon payment of the SEC s customary charges, by writing to the SEC s principal office at 100 F Street, N.E., Washington D.C. 20549. The SEC also maintains a website at www.sec.gov that contains the information that Cytyc has filed with the SEC via the EDGAR system. Documents filed with the SEC by Cytyc also are available free of charge on the investor relations portion of the Cytyc website at www.cytyc.com. At the present time, Cytyc is not eligible to incorporate by reference the information filed with the SEC into this joint proxy statement/prospectus and accordingly has included the required business and financial information in this joint proxy statement/prospectus. The business and financial information about Cytyc is attached hereto as Annex B.

Use of Non-GAAP Financial Measures

This joint proxy statement/prospectus includes non-GAAP financial measures, such as adjusted earnings per share, or adjusted EPS, and EBITDA. Adjusted EPS excludes the write-off and amortization of acquisition-related intangible assets, and tax provisions/benefits related thereto. EBITDA is defined as net earnings (loss) before interest, taxes, depreciation and amortization expense. Hologic and Cytyc believe that the use of these non-GAAP measures helps investors to gain a better understanding of our respective core operating results and future prospects, consistent with how management measures and forecasts our respective performance, especially when comparing such results to previous periods or forecasts. When analyzing Hologic s operating performance, investors should not consider these non-GAAP financial measures as a substitute for net income prepared in accordance with U.S. generally accepted accounting principles, referred to as U.S. GAAP or GAAP.

VOTING ELECTRONICALLY, BY TELEPHONE, BY MAIL OR IN PERSON

Hologic stockholders of record as of the close of business on August 22, 2007 may submit their proxies:

through the Internet, by visiting the website established for that purpose at www.voteproxy.com and following the instructions set forth therein;

by telephone, by calling toll-free 1-800-PROXIES (1-800-776-9437) in the United States, Canada or Puerto Rico on a touch-tone phone and following the recorded instructions; or

by mail, by marking, signing, and dating your proxy card and returning it in the postage-paid envelope provided or pursuant to the instructions set out in the proxy card.

In addition, a Hologic stockholder may attend the Hologic special meeting in person and vote in person. If your shares are held in street name, you must request a legal proxy from your nominee as proof of ownership in order to vote in person at the special meeting.

Cytyc stockholders of record as of the close of business on August 22, 2007 may submit their proxies:

through the Internet, by visiting the website established for that purpose at www.investorvote.com and following the instructions set forth therein:

by telephone, by calling toll-free 1-800-652-VOTE (1-800-652-8683) in the United States, Canada or Puerto Rico on a touch-tone phone and following the recorded instructions; or

by mail, by marking, signing, and dating your proxy card and returning it in the postage-paid envelope provided or pursuant to the instructions set out in the proxy card.

In addition, a Cytyc stockholder may attend the Cytyc special meeting and vote in person. If your shares are held in street name, you must request a legal proxy from your nominee as proof of ownership in order to vote in person at the special meeting.

If you hold your shares in street name, please refer to your proxy card or the information forwarded by your bank, broker or other holder of record to see which options are available to you.

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To Be Held On [], 2007

Dear Stockholder:

NOTICE IS HEREBY GIVEN that a special meeting of stockholders of Hologic, Inc. will be held on [], 2007 at 9:00 a.m., local time, at Hologic s principal executive offices located at 35 Crosby Drive, Bedford, Massachusetts 01730 (the Hologic special meeting).

The purpose of the Hologic special meeting is to consider and to vote on the following proposals:

to approve an amendment to Hologic s Certificate of Incorporation, as amended, which is referred to as the Hologic charter, effective immediately prior to the effective time of the merger, to increase the authorized number of shares of Hologic common stock from 90,000,000 to 300,000,000;

to approve the issuance of shares of Hologic common stock to stockholders of Cytyc Corporation in connection with the merger contemplated by the Agreement and Plan of Merger dated as of May 20, 2007, among Hologic, Cytyc and Nor easter Corp., a wholly owned subsidiary of Hologic formed for the purpose of the merger;

to approve the Hologic, Inc. Senior Executive Short-Term Incentive Plan;

to approve an amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan, which amendment will become effective if the merger is completed; and

if submitted to a vote of Hologic stockholders, to approve an adjournment of the special meeting, including, if necessary, to solicit additional proxies in favor of the foregoing proposals if there are not sufficient votes for those proposals.

The Hologic board of directors has unanimously determined that the merger agreement, the merger and the other transactions contemplated therein, including the amendment to the Hologic charter and the issuance of Hologic common stock in the merger, are advisable and in the best interests of Hologic and its stockholders. The Hologic board of directors recommends that Hologic stockholders vote **FOR** the amendment to the Hologic charter, **FOR** the issuance of Hologic common stock in the merger, **FOR** the approval of the Hologic, Inc. Senior Executive Short-Term Incentive Plan, **FOR** the approval of an amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan and **FOR** the adjournment of the special meeting, including, if necessary, to solicit additional proxies in favor of any of the proposals to be acted upon at the Hologic special meeting.

Hologic and Cytyc cannot complete the merger unless:

the proposed amendment to the Hologic charter is approved by the affirmative vote of a majority of the outstanding shares of Hologic common stock entitled to vote on the proposal; and

the issuance of shares of Hologic common stock to Cytyc stockholders in the merger is approved by the affirmative vote of a majority of the votes cast in person or by proxy on the proposal.

Your failure to vote will have the same effect as a vote against the approval of the Hologic charter amendment.

The close of business on August 22, 2007 has been fixed as the record date, which is referred to as the Hologic record date, for the determination of Hologic stockholders who are entitled to notice of, and to vote at, the Hologic special meeting or any adjournments or postponements of the Hologic special meeting. Only holders of Hologic common stock of record at the close of business on August 22, 2007 are entitled to notice of, and to vote at, the

Hologic special meeting or any adjournments or postponements of the Hologic special meeting. A complete list of the holders of Hologic common stock entitled to vote at the Hologic special meeting will be available for examination by any Hologic stockholder, for any purpose germane to the Hologic special meeting, at Hologic s principal executive offices at 35 Crosby Drive, Bedford, Massachusetts 01730, for a period of ten days before the Hologic special meeting, between the hours of 9:00 a.m. and 4:00 p.m., local time, and at the Hologic special meeting during the entire time of the meeting.

We direct your attention to the joint proxy statement/prospectus accompanying this notice for a more complete statement regarding the matters proposed to be acted upon at the Hologic special meeting. We encourage you to read the entire joint proxy statement/prospectus carefully, including the merger agreement, which is attached as Annex A to the joint proxy statement/prospectus, and the section entitled *Risk* Factors beginning on page 26.

YOUR VOTE IS VERY IMPORTANT. WHETHER OR NOT YOU PLAN TO ATTEND THE HOLOGIC SPECIAL MEETING, PLEASE VOTE AS SOON AS POSSIBLE BY MAIL, BY TELEPHONE OR THROUGH THE INTERNET. INSTRUCTIONS ON THESE DIFFERENT WAYS TO VOTE YOUR PROXY ARE FOUND ON THE ENCLOSED PROXY CARD. YOU MAY REVOKE YOUR PROXY AT ANY TIME BEFORE IT IS VOTED AT THE HOLOGIC SPECIAL MEETING BY FOLLOWING THE PROCEDURES SET FORTH IN THE ACCOMPANYING JOINT PROXY STATEMENT/PROSPECTUS. REMEMBER, YOUR VOTE IS IMPORTANT, SO PLEASE VOTE PROMPTLY!

By Order of the Board of Directors,

John W. Cumming

Chairman of the Board and Chief Executive Officer

[], 2007

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To Be Held On [], 2007

To the Stockholders of Cytyc Corporation:

Cytyc Corporation (Cytyc) is pleased to invite you to attend a special meeting of the stockholders of Cytyc which will be held on [], 2007 at [] a.m., local time, at The Hilton Boston Logan Airport, 85 Terminal Road, Boston, Massachusetts 02128 (the Cytyc special meeting).

The purpose of the Cytyc special meeting is to consider and to vote on the following proposals:

to adopt the Agreement and Plan of Merger, dated as of May 20, 2007, among Cytyc, Hologic, Inc. (Hologic) and Nor easter Corp., a wholly owned subsidiary of Hologic formed for the purpose of the merger (MergerSub), a copy of which is attached as Annex A to the joint proxy statement/prospectus, and the transactions contemplated thereby, including the merger, pursuant to which 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; and

if submitted to a vote of Cytyc stockholders, to approve an adjournment of the Cytyc special meeting, including, if necessary, to solicit additional proxies in favor of the proposal to adopt the merger agreement if there are not sufficient votes for that proposal at the time of the meeting.

The Cytyc board of directors has unanimously determined that the merger agreement and the transactions contemplated thereby are advisable and fair to and in the best interests of Cytyc and its stockholders, unanimously authorized, adopted and approved the merger agreement and the transactions contemplated thereby, including the merger, and recommends that Cytyc stockholders vote **FOR** the adoption of the merger agreement and the transactions contemplated thereby, including the merger, and **FOR** the adjournment of the Cytyc special meeting, including, if necessary, to solicit additional proxies in favor of the adoption of the merger agreement.

Hologic and Cytyc cannot complete the merger unless the proposal to adopt the merger agreement is approved by the affirmative vote of a majority of the outstanding shares of Cytyc common stock entitled to vote at the Cytyc special meeting.

Your failure to vote will have the same effect as a vote against the adoption of the merger agreement. Therefore, your vote is very important.

The close of business on August 22, 2007 has been fixed as the record date, which is referred to as the Cytyc record date, for the determination of Cytyc stockholders entitled to notice of, and to vote at, the Cytyc special meeting or any adjournments or postponements of the Cytyc special meeting. Only holders of record of Cytyc common stock at the close of business on the Cytyc record date are entitled to notice of, and to vote at, the Cytyc special meeting. A complete list of stockholders entitled to vote at the Cytyc special meeting will be available for examination by any Cytyc stockholder, during normal business hours, at Cytyc s headquarters at 250 Campus Drive, Marlborough, Massachusetts 01752 for purposes pertaining to the Cytyc special meeting for a period of ten days before the Cytyc special meeting, and at the Cytyc special meeting during the entire time of the meeting.

We direct your attention to the joint proxy statement/prospectus accompanying this notice for more detailed information regarding the matters proposed to be acted upon at the Cytyc special meeting. You are encouraged to read the entire joint proxy statement/prospectus carefully, including the merger agreement, which is attached as Annex A to the joint proxy statement/prospectus, and the section entitled *Risk Factors* beginning on page 26 of the joint proxy statement/prospectus.

Holders of Cytyc common stock who do not vote in favor of adopting the merger agreement and who otherwise comply with the requirements of Delaware law will be entitled to appraisal rights. A summary of the applicable Delaware law provision, including the requirements a Cytyc stockholder must follow in order to exercise his or her appraisal rights, is contained in the accompanying joint proxy statement/prospectus.

SO THAT YOUR SHARES WILL BE REPRESENTED WHETHER OR NOT YOU PLAN TO ATTEND THE CYTYC SPECIAL MEETING, PLEASE VOTE AS SOON AS POSSIBLE BY: (1) ACCESSING THE INTERNET WEBSITE SPECIFIED ON YOUR PROXY CARD; (2) CALLING THE TOLL-FREE NUMBER SPECIFIED ON YOUR PROXY CARD; OR (3) SIGNING, DATING AND MAILING THE ENCLOSED PROXY CARD. YOU MAY REVOKE YOUR PROXY AT ANY TIME BEFORE IT IS VOTED AT THE CYTYC SPECIAL MEETING BY FOLLOWING THE PROCEDURES SET FORTH IN THE ACCOMPANYING JOINT PROXY STATEMENT/PROSPECTUS. REMEMBER, YOUR VOTE IS IMPORTANT, SO PLEASE ACT PROMPTLY.

By Order of the Board of Directors,

Patrick J. Sullivan

Chairman, Chief Executive Officer and President

[], 2007

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LIST OF ANNEXES

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Annex B	Information about Cytyc, Cytyc Financial Statements and Adeza Financial Statements
Annex C	Opinion of Goldman, Sachs & Co.
Annex D	Opinion of Jefferies & Company, Inc.
Annex E	Opinion of Morgan Stanley & Co. Incorporated
Annex F	Opinion of J.P. Morgan Securities Inc.
Annex G	Section 262 of the General Corporation Law of the State of Delaware
Annex H	Amendment to Certificate of Incorporation of Hologic, Inc.
Annex I	Second Amended and Restated Bylaws of Hologic, Inc.
Annex J	Hologic, Inc. Senior Executive Short-Term Incentive Plan
Annex K	Amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan

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QUESTIONS AND ANSWERS ABOUT THE MERGER

The following are some questions that you, as a stockholder of Hologic or Cytyc, may have regarding the merger and the other matters being considered at the stockholders meetings and the answers to those questions. Hologic and Cytyc urge you to read carefully the entire joint proxy statement/prospectus because the information in this section does not provide all the information that might be important to you with respect to the merger and the other matters being considered at the stockholders meetings. Additional important information is also contained in the annexes to and the documents incorporated by reference into this joint proxy statement/prospectus.

Q: Why am I receiving this joint proxy statement/prospectus?

A: Hologic and Cytyc are proposing to combine the two companies in a merger transaction pursuant to the terms of a merger agreement that is described in this joint proxy statement/prospectus. In the merger, Cytyc will be merged with and into a wholly owned subsidiary of Hologic that was formed for the purpose of the merger, with the Hologic subsidiary surviving the merger and remaining a wholly owned subsidiary of Hologic under the name Cytyc Corporation. A copy of the merger agreement is attached to this joint proxy statement/prospectus as Annex A.

In order to complete the merger, Hologic stockholders must approve an amendment to Hologic s charter to increase the number of authorized shares of Hologic common stock and approve the issuance of shares of Hologic common stock in connection with the merger, and Cytyc stockholders must adopt the merger agreement and the transactions contemplated thereby, including the merger. In addition, all other conditions to the merger must be satisfied or waived.

Neither the amendment to the Hologic charter nor the issuance of Hologic common stock in connection with the merger will take place unless both of these proposals are approved by Hologic stockholders and the merger is completed. Hologic will hold a special meeting of its stockholders, referred to as the Hologic special meeting, to obtain the required approvals of Hologic stockholders, and Cytyc will hold a special meeting of its stockholders, referred to as the Cytyc special meeting, to obtain the required approval of Cytyc stockholders.

Q: What will I receive in the merger?

A: *Hologic stockholders*. Each share of Hologic common stock held by Hologic stockholders immediately before the merger will continue to represent one share of Hologic common stock after the effective time of the merger. In other words, Hologic stockholders will receive no consideration in the merger and the merger will not change the number of shares a Hologic stockholder currently owns.

Cytyc stockholders. For each share of Cytyc common stock held immediately before the effective time of the merger, Cytyc stockholders will have the right to receive 0.52 of a share of Hologic common stock and \$16.50 in cash without interest. Cytyc stockholders will also receive cash for any fractional shares of Hologic common stock that they would otherwise receive in the merger. The amount of cash for fractional shares will be calculated by multiplying the fraction of a share of Hologic common stock to which the Cytyc stockholder would be entitled to receive in the merger by the closing sale price of a share of Hologic common stock on the closing date of the merger.

Hologic and Cytyc expect that, upon completion of the merger, assuming conversion of all of Cytyc soutstanding 2.25% Senior Convertible Notes due 2024, approximately 55% of the outstanding common stock of Hologic will be held by former Cytyc stockholders, and approximately 45% of the outstanding common stock of Hologic will be held by current Hologic stockholders.

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- Q: How will Hologic pay for the cash portion of the merger consideration?
- A: Hologic has received a firm financing commitment from Goldman Sachs Credit Partners L.P., Bank of America, N.A., Banc of America Securities LLC, Banc of America Bridge LLC, Citigroup Global Markets Inc., JPMorgan Chase Bank, N.A., and J.P. Morgan Securities Inc., collectively referred to as the arrangers, in which the arrangers committed to provide, in the aggregate, financing of up to approximately \$2.55 billion to pay for the cash portion of the merger consideration, for repayment of existing debt of Hologic and Cytyc, for expenses relating to the merger and for working capital following the completion of the merger. For a more detailed description of the terms of the financing and the commitment letter, see The Merger Financing of the Merger beginning on page 59, and for information about certain risks related to the financing, see Risk Factors Risks Related to Indebtedness of the Combined Company beginning on page 30.
- Q: Is the merger expected to be taxable to stockholders?
- A: Hologic and Cytyc intend for the merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended, which we refer to as the Code. If you are a Cytyc stockholder, you generally will recognize income or gain for U.S. federal income tax purposes equal to the lesser of (i) the amount of cash (excluding cash that you receive in lieu of fractional shares of Hologic common stock) that you receive and (ii) the amount of gain that you realize, which generally is equal to the sum of (a) the amount of cash that you receive plus (b) the fair market value of any Hologic common stock that you receive, over your tax basis in the shares of Cytyc common stock that you surrender pursuant to the merger. In addition, if you receive cash in lieu of a fractional share of Hologic common stock, you will recognize gain or loss based on the difference between the cash you receive for such fractional share and your tax basis allocable to the fractional share.

You should read Material United States Federal Income Tax Consequences of the Merger beginning on page 111 for a more complete discussion of the United States federal income tax consequences of the merger.

If you are a Hologic stockholder, you will simply retain your shares of Hologic common stock, and the merger therefore will not be taxable to you.

Tax matters can be complicated and the tax consequences of the merger to you will depend on your particular tax situation. We recommend that you consult your tax advisor to determine the tax consequences of the merger to you.

- Q: When and where are the Hologic and Cytyc special meetings?
- A: *Hologic special meeting*. The Hologic special meeting will be held on [], 2007 at 9:00 a.m., local time, at Hologic s principal executive offices located at 35 Crosby Drive, Bedford, Massachusetts 01730, to consider and vote on the proposals related to the merger and certain other proposals.

Cytyc special meeting. The Cytyc special meeting will be held on [], 2007 at [] a.m., local time, at The Hilton Boston Logan Airport, 85 Terminal Road, Boston, Massachusetts 02128 to consider and vote on the proposals related to the merger.

Q: What are Hologic stockholders being asked to vote on?

A: Hologic stockholders are being asked to vote (i) to approve an amendment to the Hologic charter to increase the number of authorized shares of Hologic common stock, (ii) to approve the issuance of shares of Hologic common stock to Cytyc stockholders in connection with the merger, (iii) to approve the Hologic, Inc. Senior Executive Short-Term Incentive Plan, (iv) to approve an amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan, and (v) if submitted to a vote of Hologic stockholders, to approve the adjournment of the Hologic special meeting, including, if necessary, to solicit additional proxies in favor of any of the foregoing proposals.

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- Q: Why are Hologic stockholders being asked to approve the Hologic, Inc. Senior Executive Short-Term Incentive Plan?
- A: Hologic is submitting the Hologic, Inc. Senior Executive Short-Term Incentive Plan for stockholder approval as required by Section 162(m) of the Code. If the plan is approved by stockholders and the terms of the plan are satisfied, the payment of bonuses to certain executive officers of Hologic will be fully deductible by Hologic as qualified performance-based compensation under Section 162(m) of the Code.
- Q: Why are Hologic stockholders being asked to approve an amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan?
- A: Hologic is submitting the amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan for stockholder approval for the purpose of increasing the number of shares of common stock available for issuance under that plan by 4,000,000 shares effective upon completion of the merger. Following completion of the merger, the combined company will be a much larger company with significantly more employees. The Hologic board of directors believes the combined company will need a significant number of shares available to provide equity-based incentive compensation to the directors, officers and other employees of the combined company following the merger.
- Q: What are Cytyc stockholders being asked to vote on?
- A: Cytyc stockholders are being asked to vote (i) to adopt the merger agreement and the transactions contemplated thereby, including the merger, and (ii) if submitted to a vote of the Cytyc stockholders, to approve the adjournment of the Cytyc special meeting, including, if necessary, to solicit additional proxies in favor of the proposal to adopt the merger agreement.
- Q: What vote by Hologic stockholders is required to approve the proposals to be submitted to Hologic stockholders at the Hologic special meeting?
- A: The affirmative vote of a majority of the outstanding shares of Hologic common stock entitled to vote at the Hologic special meeting is required for approval of the amendment to Hologic s charter to increase the number of authorized shares of Hologic common stock from 90,000,000 to 300,000,000.

The affirmative vote of a majority of the votes cast in person or by proxy at the Hologic special meeting is required to approve the proposals relating to the issuance of Hologic common stock to Cytyc stockholders in the merger, the approval of the Hologic, Inc. Senior Executive Short-Term Incentive Plan and the approval of the amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan.

The affirmative vote of a majority of votes cast in person or by proxy, whether or not a quorum is present at the Hologic special meeting, is required for stockholders to approve the proposal to adjourn the Hologic special meeting.

Q: What vote by Cytyc stockholders is required to approve the proposals to be submitted to Cytyc stockholders at the Cytyc special meeting?

A:

The affirmative vote of a majority of the outstanding shares of Cytyc common stock entitled to vote at the Cytyc special meeting is required to adopt the merger agreement and the transactions contemplated thereby, including the merger.

The affirmative vote of a majority of votes cast in person or by proxy, whether or not a quorum is present at the Cytyc special meeting, is required for stockholders to approve the proposal to adjourn the Cytyc special meeting.

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- Q: Who can vote at the Hologic special meeting?
- A: Hologic stockholders can vote at the Hologic special meeting if they owned shares of Hologic common stock at the close of business on August 22, 2007, the record date for the Hologic special meeting. As of the close of business on that day, [] shares of Hologic common stock were outstanding.
- Q: Who can vote at the Cytyc special meeting?
- A: Cytyc stockholders can vote at the Cytyc special meeting if they owned shares of Cytyc common stock at the close of business on August 22, 2007, the record date for the Cytyc special meeting. As of the close of business on that day, [] shares of Cytyc common stock were outstanding.
- Q: Why is my vote important?
- A: In order to complete the merger, Hologic stockholders must approve the amendment to the Hologic charter to increase the number of authorized shares of Hologic common stock and the issuance of Hologic common stock to Cytyc stockholders in the merger, and Cytyc stockholders must adopt the merger agreement and the transactions contemplated thereby, including the merger. *Hologic stockholders*.

If you abstain from voting or do not vote (either in person or by proxy), or fail to direct your broker how to vote, it will have the same effect as a vote AGAINST the proposal to approve the amendment to the Hologic charter.

If you abstain from voting or do not vote (either in person or by proxy), or fail to direct your broker how to vote, it will have NO EFFECT on the proposals to approve the issuance of shares of Hologic common stock to Cytyc stockholders in the merger, the Hologic, Inc. Senior Executive Short-Term Incentive Plan, the amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan or to adjourn the Hologic special meeting to solicit additional proxies in favor of any of the foregoing proposals to be acted upon at the Hologic special meeting.

Cytyc stockholders.

If you abstain from voting or do not vote (either in person or by proxy), or fail to direct your broker how to vote, it will have the same effect as a vote AGAINST the proposal to adopt the merger agreement and the transactions contemplated thereby, including the merger.

If you abstain from voting or do not vote (either in person or by proxy), or fail to direct your broker how to vote, it will have NO EFFECT on the proposal to adjourn the Cytyc special meeting to solicit additional proxies in favor of the proposal to adopt the merger agreement.

Q: If my shares are held in street name by my broker, will my broker vote my shares for me?

A:

Your broker is not permitted to decide how your shares should be voted. Your broker will only vote your shares on a proposal if you provide your broker with voting instructions on that proposal. You should instruct your broker to vote your shares by following the directions that your broker provides you. **Please check the voting information form used by your broker to see if it offers telephone or Internet voting**.

Q: What if I fail to instruct my broker?

A: If you fail to instruct your broker to vote your shares, they will not be voted at your company s special meeting and will have the consequences set forth under Why is my vote important?

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- Q: What will happen if I return my proxy card without indicating how to vote?
- A. If you sign and send in your proxy and do not indicate how you want to vote on any particular proposal, the Hologic or Cytyc common stock represented by your proxy will be voted FOR that proposal.
- Q: What do I do if I want to change my vote?
- A: You can change your vote at any time before your proxy is voted at your company s special meeting. You can do this in one of four ways:

you can send a signed notice of revocation;

you can grant a new, valid proxy by executing a new proxy card bearing a later date;

you can vote at a later time by telephone or through the Internet; or

if you are a holder of record, you can attend the applicable special meeting and vote in person, but your attendance alone will not revoke any proxy that you have previously given.

If you choose either of the first two methods, your notice of revocation or your new proxy must be received by your company s corporate secretary at the address provided under The Companies beginning on page 7 no later than the beginning of the applicable special meeting. If you are a Hologic stockholder, you can find further details on how to revoke your proxy in The Hologic Special Meeting Revocation of Proxies beginning on page 139. If you are a Cytyc stockholder, you can find further details on how to revoke your proxy in The Cytyc Special Meeting Revocation of Proxies beginning on page 142.

If you hold your shares in street name, please refer to your proxy card or the information forwarded by your bank, broker or other holder of record to see which options are available to you.

Q: Can I dissent and require appraisal of my shares?

A: *Hologic stockholders*. Under Delaware law, Hologic stockholders have no right to an appraisal of the fair value of their shares in connection with the merger.

Cytyc stockholders. Under Delaware law, instead of receiving the merger consideration, Cytyc stockholders are entitled to demand to have the fair value of their shares at the effective time of the merger judicially determined and paid to them in cash. A stockholder who desires to exercise appraisal rights must (i) not vote in favor of the merger, (ii) deliver a written demand for appraisal of his or her shares to the corporate secretary of Cytyc before the vote on the merger at the Cytyc special meeting and (iii) otherwise comply with the provisions of Delaware law. You should carefully read and follow the instructions under The Merger Appraisal Rights beginning on page 107 if you wish to exercise your appraisal rights.

Q: What do I do now?

A: Carefully read and consider the information contained in and incorporated by reference into this joint proxy statement/prospectus, including its annexes.

In order for your shares to be represented at your special stockholders meeting:

you can vote by telephone or through the Internet by following the instructions included on your proxy card;

you can indicate on the enclosed proxy card how you would like to vote and sign and return the proxy card in the accompanying pre-addressed postage paid envelope; or

you can attend your special meeting and vote in person.

If you hold your shares in street name, please refer to your proxy card or the information forwarded by your bank, broker or other holder of record to see which options are available to you.

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- Q: Should stockholders send in their stock certificates with their proxies?
- A: No. Cytyc stockholders should not send in their stock certificates at this time. If the merger is completed, Hologic s exchange agent will send former Cytyc stockholders a letter of transmittal and written instructions explaining what they must do to exchange their Cytyc stock certificates or transfer uncertificated shares for the merger consideration payable to them.

Hologic stockholders will retain their current stock certificates after the merger and should not send in their stock certificates.

- Q: When do you expect to complete the merger?
- A: Hologic and Cytyc are working to complete the merger as quickly as practicable. However, Hologic and Cytyc cannot assure you when or if the merger will be completed. Completion of the merger is subject to satisfaction or waiver of the conditions specified in the merger agreement, including receipt of the necessary approvals of each of Hologic s and Cytyc s stockholders at their respective special meetings and any necessary regulatory approvals. It is possible that factors outside the control of both companies could result in the merger being completed later than expected. Although the exact timing of completion of the merger cannot be predicted with certainty, Hologic and Cytyc anticipate completing the merger in mid-October 2007. See The Merger Agreement Conditions to Completion of the Merger beginning on page 129.
- Q: Whom should I call with questions?
- A: *Hologic Stockholders*. If you have additional questions about the merger or the other matters to be voted on at the Hologic special meeting or if you desire additional copies of this joint proxy statement/prospectus or you need assistance voting your shares, you should contact:

105 Madison Avenue

New York, NY 10016

(212) 929-5500 (Call Collect)

or

Call Toll-Free (800) 322-2885

Email: proxy@mackenziepartners.com

Cytyc Stockholders. If you have additional questions about the merger or the other matters to be voted on at the Cytyc special meeting or if you desire additional copies of this joint proxy statement/prospectus or you need assistance voting your shares, you should contact:

Morrow & Co., Inc.

470 West Avenue

Stamford, CT 06902

(203) 658-9400

Banks and Brokerage Firms, Please Call: (203) 658-9400

Stockholders Call Toll-Free: (800) 607-0088

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SUMMARY

This summary highlights information contained elsewhere in this joint proxy statement/prospectus. It does not contain all of the information that may be important to you. You are urged to read carefully this entire joint proxy statement/prospectus, including the attached annexes, and the other documents to which this joint proxy statement/prospectus refers you in order for you to fully understand the proposed merger. See Where You Can Find More Information beginning on page 197. Each item in this summary refers to the page of this joint proxy statement/prospectus on which that subject is discussed in more detail.

The Companies

Hologic, Inc. (see page 115)

Hologic, Inc.

35 Crosby Drive

Bedford, MA 01730

(781) 999-7300

http://www.hologic.com1

Hologic is a leading developer, manufacturer and supplier of diagnostic and medical imaging systems primarily dedicated to serving the healthcare needs of women. Hologic focuses its resources on developing systems and subsystems offering superior image quality and diagnostic accuracy, which has enabled it to capture significant market share and customer loyalty, despite the presence of large competitors.

Hologic s core women s healthcare business units are focused on mammography and breast care, and osteoporosis assessment. Its mammography and breast care products include a broad product line of breast imaging and related products, including film-based and digital mammography systems, computer-aided detection (CAD), breast biopsy systems and breast biopsy and tissue extraction devices. Hologic s Lorad line of mammography systems and its bone densitometry product line are premier brands in their markets. Hologic s newly acquired CAD product lines from R2 Technology, Inc. and breast biopsy devices and tissue extraction product lines from Suros Surgical Systems, Inc. also hold positions of industry prominence in their areas of application. Hologic s osteoporosis assessment products primarily consist of dual-energy X-ray bone densitometry systems and an ultrasound-based osteoporosis assessment product. Hologic s other business unit includes: Fluoroscan mini C-arm imaging products, Esaote line of extremity MRI (Magnetic Resonance Imaging) systems which are manufactured by an original equipment manufacturer and photoconductor coating business, which Hologic acquired in connection with its acquisition of AEG Electrofotografie GmbH and its group of related companies. Hologic s customers include hospitals, imaging clinics and private practices, many of the leading healthcare organizations in the world and major pharmaceutical companies utilizing Hologic s products in conducting clinical trials.

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The information contained on Hologic s website is expressly not incorporated by reference into this joint proxy statement/prospectus.

Nor easter Corp. (see page 115)

Nor easter Corp.

35 Crosby Drive

Bedford, MA 01730

(781) 999-7300

Nor easter Corp. is a wholly owned subsidiary of Hologic that was incorporated in Delaware in May 2007. Nor easter does not engage in any operations and exists solely to facilitate the merger.

Cytyc Corporation (see page 116)

Cytyc Corporation

250 Campus Drive

Marlborough, MA 01752

(508) 263-2900

http://www.cytyc.com²

Cytyc is a diversified diagnostic and medical device company that designs, develops, manufactures, and markets innovative and clinically effective diagnostic and surgical products. Cytyc s products cover a range of cancer and women s health applications, including cervical cancer screening, pre-term birth risk assessment treatment of excessive menstrual bleeding, radiation treatment of early-stage breast cancer, and radiation treatment of patients with malignant brain tumors.

Cytyc operates its business in three reportable segments: domestic diagnostic products, domestic surgical products and international. Cytyc s domestic diagnostic products segment develops and markets the ThinPrep® System in the United States primarily for use in cytology testing applications, such as cervical cancer screening, and FullTerm®, The Fetal Fibronectin Test, acquired as part of Cytyc s purchase of Adeza Biomedical Corporation, which offers clinical and cost benefits for the assessment of the risk of pre-term birth. Cytyc s domestic surgical products segment develops and markets the NovaSure® System, an innovative endometrial ablation device to treat menorrhagia, or excessive menstrual bleeding, the MammoSite® Radiation Therapy System, a device for the treatment of early-stage breast cancer that positions radiation sources directly into the post-lumpectomy site to optimize radiation treatment delivery while minimizing damage to healthy tissue, and the GliaSite® Radiation Therapy System for the treatment of malignant brain tumors. The domestic surgical segment, as part of Cytyc s purchase of Adiana Inc., acquired the Adiana Complete Transcervical Sterilization System®, TCS, which is a form of permanent female contraception intended as an alternative to tubal ligation and for which Cytyc is in the process of seeking a pre-market approval from the U.S. Food and Drug Administration. The domestic surgical products segment markets these products in the United States. Cytyc s international segment markets its diagnostic and surgical products outside of the United States.

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The information contained on Cytyc s website is expressly not incorporated by reference into this joint proxy statement/prospectus.

The Merger

The Agreement and Plan of Merger, dated as of May 20, 2007, among Hologic, Cytyc and Nor easter Corp., which is referred to as the merger agreement, is attached as Annex A to this joint proxy statement/prospectus. Cytyc and Hologic encourage you to read carefully the merger agreement in its entirety because it is the principal legal agreement that governs the merger.

Structure of the Merger (see page 117)

Subject to the terms and conditions of the merger agreement, at the effective time of the merger, Cytyc will merge with and into Nor easter Corp., a wholly owned subsidiary of Hologic that was formed for the purpose of the merger, with Nor easter Corp. surviving the merger as a direct, wholly owned subsidiary of Hologic. At the effective time of the merger, Nor easter Corp. will be renamed Cytyc Corporation.

Merger Consideration (see page 117)

Cytyc stockholders. As a result of the merger, Cytyc stockholders will be entitled to receive, for each issued and outstanding share of Cytyc common stock that they own immediately prior to the effective time of the merger, 0.52 of a share, referred to as the exchange ratio, of Hologic common stock, referred to as the stock merger consideration, and \$16.50 in cash without interest, referred to as the cash merger consideration. The combined company will not issue any fractional shares of Hologic common stock in the merger. Instead, Cytyc stockholders will receive cash in lieu of any fractional shares of Hologic common stock that they would have otherwise received in the merger. The amount of cash for fractional shares will be calculated by multiplying the fraction of a share of Hologic common stock to which the Cytyc stockholder would be entitled to receive in the merger by the closing sale price of a share of Hologic common stock on the closing date of the merger. The stock merger consideration, together with the cash merger consideration and any cash received in lieu of fractional shares, is referred to as the merger consideration.

Hologic stockholders. Hologic stockholders will continue to own their existing shares of Hologic common stock after the merger. Hologic stockholders should not send in their stock certificates in connection with the merger.

Ownership of the Combined Company After the Merger

Hologic will issue approximately 65.1 million shares of Hologic common stock to Cytyc stockholders in the merger based on the number of shares of Cytyc common stock outstanding on June 30, 2007, assuming conversion of all of Cytyc s outstanding 2.25% Senior Convertible Notes due 2024. At the completion of the merger, it is expected that there will be outstanding approximately 119.1 million shares of common stock of the combined company. The shares of Hologic common stock issued to former Cytyc stockholders in the merger will represent approximately 55% of the outstanding common stock of the combined company immediately after the merger. Shares of Hologic common stock held by current Hologic stockholders will represent approximately 45% of the outstanding common stock of the combined company immediately after the merger.

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Recommendations to Stockholders

Recommendations to Hologic stockholders. The Hologic board of directors has unanimously determined that the merger agreement and the merger and other transactions contemplated therein, including an amendment to the Hologic charter and the issuance of Hologic common stock in the merger are advisable to and in the best interests of Hologic and its stockholders. The Hologic board of directors recommends that Hologic stockholders vote:

FOR an amendment to the Hologic charter to increase the authorized number of shares of Hologic common stock from 90,000,000 to 300,000,000 shares;

FOR the issuance of Hologic common stock to Cytyc stockholders in the merger;

FOR the approval of the Hologic, Inc. Senior Executive Short-Term Incentive Plan;

FOR the approval of the amendment to the Hologic s Second Amended and Restated 1999 Equity Incentive Plan; and

FOR the adjournment of the special meeting, including, if necessary, to solicit additional proxies in favor of any of the foregoing proposals.

For additional information see The Hologic Special Meeting Board Recommendations beginning on page 135.

Recommendations to Cytyc stockholders. The Cytyc board of directors has unanimously determined that the merger agreement and the transactions contemplated thereby, including the merger, are advisable and fair to and in the best interests of Cytyc and its stockholders. The Cytyc board of directors recommends that Cytyc stockholders vote:

FOR the adoption of the merger agreement and the transactions contemplated thereby, including the merger; and

FOR the adjournment of the special meeting, including, if necessary, to solicit additional proxies in favor of the foregoing proposal. For additional information see The Cytyc Special Meeting Board Recommendations beginning on page 140.

Opinions of Financial Advisors (see pages 62 and 84)

Hologic (See page 62)

Hologic s financial advisors, Goldman, Sachs & Co., which is referred to as Goldman Sachs, and Jefferies & Company, Inc., which is referred to as Jefferies, each delivered their respective opinions to the Hologic board of directors that, as of the date of the fairness opinion and based upon and subject to the assumptions, procedures, factors, limitations and qualifications set forth therein, the merger consideration to be paid for each outstanding share of Cytyc common stock, taken in the aggregate, to be paid pursuant to the merger agreement was fair, from a financial point of view, to Hologic.

The full text of the written opinion of each of Goldman Sachs and Jefferies, each dated May 20, 2007, which sets forth assumptions made, procedures followed, matters considered and qualifications and limitations on the review undertaken in connection with each of their opinions, is attached hereto as Annex C and Annex D, respectively. Goldman Sachs and Jefferies provided their opinions for the information and assistance of the Hologic board of directors in connection with its consideration of the merger. The Goldman Sachs and Jefferies

opinions are not a recommendation as to how any holder of Hologic common stock or Cytyc common stock should vote at any stockholders meeting to be held in connection with, or take any action with respect to, the merger.

Cytyc (See page 84)

Cytyc s financial advisors, Morgan Stanley & Co. Incorporated, which is referred to as Morgan Stanley, and J.P. Morgan Securities Inc., which is referred to as JPMorgan, each delivered their respective opinions to the Cytyc board of directors to the effect that, as of the date of the fairness opinion and based upon and subject to the factors and assumptions set forth therein, the merger consideration to be received by the holders of Cytyc common stock pursuant to the merger agreement was fair from a financial point of view to such holders.

The full text of the written opinion of each of Morgan Stanley and JPMorgan, each dated May 20, 2007, which sets forth assumptions made, procedures followed, matters considered and limitations on the review undertaken in connection with each of their opinions, is attached hereto as Annex E and Annex F, respectively. Morgan Stanley and JPMorgan provided their opinions for the information and assistance of the Cytyc board of directors in connection with its consideration of the merger. The Morgan Stanley and JPMorgan opinions are not recommendations as to how any holder of Cytyc common stock or Hologic common stock should vote on, or take any action with respect to, the merger.

Treatment of Cytyc Stock Options and Other Equity Based Awards (see page 118)

Outstanding Cytyc stock options at the effective time of the merger will be converted into options to purchase Hologic common stock, with appropriate adjustments made to the number of shares and the exercise price under those options based on the value of the merger consideration. Outstanding Cytyc restricted stock units at the effective time of the merger will be converted into the right to receive, on the same terms and conditions as were applicable to the Cytyc restricted stock units, Hologic common stock, with appropriate adjustments made to the number of shares based on the value of the merger consideration. Outstanding Cytyc performance shares and accrued shares issuable to Cytyc directors will vest as of the effective time of the merger and the holders thereof will be entitled to receive the merger consideration on the same basis as all other shares of Cytyc common stock. Outstanding deferred shares granted under Cytyc s amended and restated director compensation plan will, at the effective time of the merger, be converted into shares of Hologic common stock based on the value of the merger consideration.

Interests of Hologic s and Cytyc s Executive Officers and Directors in the Merger (see pages 75 and 95)

When you consider the Hologic and Cytyc board of directors respective recommendations that stockholders vote in favor of the proposals described in this joint proxy statement/prospectus, you should be aware that (i) some Cytyc executive officers and directors may have interests that may be different from, or in addition to, Cytyc stockholders interests, including but not limited to, their receipt of change of control payments under existing Cytyc change of control agreements in connection with the merger, entry into new change of control agreements and retention and severance agreements with Hologic, new employment arrangements with Hologic, accelerated vesting of Cytyc stock options and other equity awards at the effective time of the merger, and the right of Cytyc s executive officers and directors to continued indemnification and insurance coverage for acts or omissions occurring before the merger; and (ii) some Hologic executive officers and directors may have interests that may be different from, or in addition to, Hologic stockholders interests, including but not limited to, accelerated vesting of stock options and other equity awards upon completion of the merger, payments under change of control agreements in connection with the merger, and a new retention and severance agreement for one executive officer.

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Appraisal Rights (see page 107)

Under the General Corporation Law of the State of Delaware, referred to as the DGCL, instead of receiving the merger consideration, Cytyc stockholders are entitled to demand to have the fair value of their shares at the effective time of the merger judicially determined and paid to them in cash. A stockholder who desires to exercise appraisal rights must (i) not vote in favor of the merger, (ii) deliver a written demand for appraisal of his or her shares to the corporate secretary of Cytyc before the vote on the merger at the Cytyc special meeting and (iii) otherwise comply with the provisions of the DGCL. You should carefully read and follow the instructions under The Merger Appraisal Rights commencing on page 107 if you wish to exercise your appraisal rights.

Under the DGCL, Hologic stockholders have no right to an appraisal of the fair value of their shares in connection with the merger.

Material United States Federal Income Tax Consequences of the Merger (see page 111)

Hologic and Cytyc intend for the merger to qualify as a reorganization within the meaning of Section 368(a) of the Code. If you are a Cytyc stockholder, you generally will recognize income or gain for U.S. federal income tax purposes equal to the lesser of (i) the amount of cash (excluding cash that you receive in lieu of fractional shares of Hologic common stock) that you receive and (ii) the amount of gain that you realize, which generally is equal to the sum of (a) the amount of cash that you receive plus (b) the fair market value of any Hologic common stock that you receive, over your tax basis in the shares of Cytyc common stock that you surrender pursuant to the merger. Your income or gain may vary if you acquired your Cytyc common stock in more than one transaction. In addition, if you receive cash in lieu of a fractional share of Hologic common stock, you will recognize gain or loss based on the difference between the cash you receive for such fractional share and your tax basis allocable to the fractional share.

You should read Material United States Federal Income Tax Consequences of the Merger beginning on page 111 for a more complete discussion of the U.S. federal income tax consequences of the merger.

If you are a Hologic stockholder, you will simply retain your shares of Hologic common stock, and the merger therefore will not be taxable to you.

Tax matters can be complicated and the tax consequences of the merger to you will depend on your particular tax situation. We recommend that you consult your tax advisor to determine the tax consequences of the merger to you.

Accounting Treatment (see page 105)

Hologic prepares its financial statements in accordance with U.S. GAAP. The merger will be accounted for using the purchase method of accounting. As discussed under The Merger Accounting Treatment on page 105, based on the facts that Hologic board members and senior management will control and represent a majority of the board of directors and senior management of the combined company, as well as the terms of the exchange, pursuant to which Cytyc stockholders will receive a premium of approximately 32.5% (as of the date preceding the merger announcement) over the fair market value of their shares on such date and cash of \$16.50 per share (or approximately 36.0% of the merger consideration), Hologic is considered to be the acquirer of Cytyc for accounting purposes. This means that Hologic will allocate the purchase price to the fair value of Cytyc sassets and liabilities at the effective time of the merger, with the excess purchase price being recorded as goodwill. Under the purchase method of accounting, goodwill is not amortized but is tested for impairment at least annually.

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Regulatory Approvals (see page 114)

Hologic and Cytyc have each agreed to use their reasonable best efforts in order to obtain all regulatory approvals required in order to complete the merger. These approvals include approvals by the U.S. Federal Trade Commission, the U.S. Department of Justice and state antitrust authorities. Hologic and Cytyc each submitted their antitrust filings with the U.S. Department of Justice and the U.S. Federal Trade Commission on June 1, 2007, which commenced the initial waiting period of 30 days. On July 2, 2007, the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, referred to as the HSR Act, expired without a request for additional information. Based on the review and analyses performed, Hologic and Cytyc do not believe that any other antitrust related filings are required in any foreign jurisdictions.

Listing of Hologic Common Stock (see page 128)

Hologic has agreed to use its commercially reasonable efforts to cause the shares of Hologic common stock to be issued in the merger to be approved for listing on the Nasdaq Global Select Market.

Conditions to Completion of the Merger (see page 129)

The obligations of each of Hologic and Cytyc to complete the merger are subject to the satisfaction at or before the effective time of the merger of a number of mutual conditions, including the following:

adoption of the merger agreement and the transactions contemplated thereby, including the merger, by Cytyc stockholders;

approval of the amendment to the Hologic charter to increase the number of authorized shares of common stock and the issuance of the Hologic common stock in the merger, by Hologic stockholders;

absence of any applicable law, rule, order, injunction or judgment prohibiting or preventing the completion of the merger;

the applicable waiting period under the HSR Act or under any similar foreign statutes or regulations applicable to the merger shall have expired or terminated or, where applicable, approval shall have been obtained, except where the failure of which to expire, terminate or be obtained would not reasonably be expected to materially and adversely affect Cytyc or Hologic, taken as a whole, or would not reasonably be expected to result in criminal liability;

Hologic s registration statement on Form S-4, which includes this joint proxy statement/prospectus, being effective and not subject to any SEC stop order;

approval for the listing on the Nasdaq Global Select Market of the shares of Hologic common stock to be issued in the merger subject to official notice of issuance;

receipt of all required approvals of any governmental body, agency, official or authority, except those that would not reasonably be expected to (i) materially and adversely diminish the benefits expected to be derived by the parties on the date of the merger agreement from the combination of Hologic and Cytyc (the combined business to be taken as a whole); or (ii) otherwise have a regulatory material adverse effect as described in the merger agreement; and

absence of any applicable law, rule, order, injunction or judgment enacted or deemed applicable to the merger that would reasonably be expected to (i) materially and adversely diminish the benefits expected to be derived by the parties on the date of the merger agreement from the combination of Hologic and Cytyc (the combined business to be taken as a whole); or (ii) otherwise have a

regulatory material adverse effect as described in the merger agreement.

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In addition, the obligations of each of Hologic and Cytyc to complete the merger are subject to the satisfaction or waiver at or before the effective time of the merger of the following additional conditions:

the other party shall have performed in all material respects all of its obligations required to be performed by it at or prior to the effective time;

the representations and warranties of the other party shall be accurate, to the extent specified in the merger agreement;

no material adverse effect, as defined in the merger agreement, shall have occurred and be continuing with respect to the other party since May 20, 2007; and

receipt of opinions of counsel to that party that the merger will qualify as a reorganization within the meaning of Section 368(a) of the Code, and that Hologic, Cytyc and Nor easter Corp. will qualify as parties to a reorganization within the meaning of Section 368(b) of the Code.

The obligations of Hologic to complete the merger are further conditioned on the requirement that holders of no greater than 10% of the issued and outstanding common stock of Cytyc shall have demanded appraisal for such shares in accordance with the DGCL.

Termination of the Merger Agreement (see page 130)

Hologic and Cytyc can mutually agree to terminate the merger agreement at any time. Either company may also terminate the merger agreement, under specified circumstances, if the merger is not completed by November 16, 2007, or under other circumstances described in this joint proxy statement/prospectus.

Expenses and Termination Fees (see page 132)

Generally, all fees and expenses incurred in connection with the merger agreement and the transactions contemplated by the merger agreement will be paid by the party incurring those expenses, subject to the specific exceptions discussed in this joint proxy statement/prospectus. The merger agreement provides that, upon termination of the merger agreement under specified circumstances described elsewhere in this joint proxy statement/prospectus, Cytyc may be required to pay Hologic a termination fee of \$50 million (referred to as a Hologic reduced fee) or \$150 million (referred to as a Hologic rejection fee) or Hologic may be required to pay Cytyc a termination fee of \$33 million (referred to as a Cytyc reduced fee) or \$100 million (referred to as a Cytyc rejection fee), in each case, depending on the termination event.

Headquarters (see page 106)

The combined company s corporate headquarters will be located at 35 Crosby Drive, Bedford, Massachusetts 01730. The headquarters of the Cytyc business will continue to be located in Marlborough, Massachusetts.

Executive Officers (see page 106)

Hologic and Cytyc have agreed that at the effective time of the merger, John W. Cumming will be the chief executive officer of Hologic and Patrick J. Sullivan will be the chairman of the Hologic board of directors. In addition, at the effective time of the merger, Dr. Jay A. Stein, currently chairman emeritus, director and chief technical officer of Hologic, will serve as chairman emeritus and chief technical officer of Hologic.

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Board of Directors and Corporate Governance After the Merger (see page 105)

In connection with the merger, the parties have reached certain agreements regarding the governance of Hologic at the effective time of the merger, including the following:

Hologic Board of Directors. The board of directors of Hologic will consist of eleven directors, six of whom will be designated by Hologic and five of whom will be designated by Cytyc. Four of the six persons designated by Hologic will be independent directors as defined under applicable Nasdaq listing standards, and the remaining two persons will be John W. Cumming, current chairman and chief executive officer of Hologic, and Glenn P. Muir, current chief financial officer of Hologic. Three of the five persons designated by Cytyc will be independent directors as defined under applicable Nasdaq listing standards, and the remaining two persons will be Patrick J. Sullivan, current chairman, chief executive officer and president of Cytyc, and Daniel J. Levangie, current executive vice president of Cytyc and president of Cytyc surgical products.

Committees of the Hologic Board of Directors. The board of directors of Hologic will have audit, compensation, nominating and corporate governance, and corporate development committees. The audit, nominating and corporate governance and corporate development committees will each consist of an odd number of directors, consisting of one more continuing Hologic director than continuing Cytyc directors, and the chairman of each of these committees will be a continuing Hologic director. The compensation committee will consist of an even number of directors, consisting of an equal number of continuing Cytyc directors and continuing Hologic directors, and the chairman of the compensation committee will be a continuing Cytyc director.

Hologic Bylaws Amendment (see page 156)

In connection with approving the merger agreement, Hologic s board of directors approved amendments to Hologic s bylaws, which will become effective only upon completion of the merger. These amendments include provisions giving effect to the governance provisions described above under Board of Directors and Corporate Governance After the Merger and providing for mandatory indemnification for directors and officers to the extent permitted by Delaware law.

Special Meetings of Hologic and Cytyc Stockholders

Hologic Special Meeting (see page 135)

Meeting. The Hologic special meeting will be held on [], 2007, at 9:00 a.m., local time, at Hologic s principal executive offices located at 35 Crosby Drive, Bedford, Massachusetts 01730. At the Hologic special meeting, Hologic stockholders will be asked:

to approve an amendment to Hologic s charter, effective immediately prior to the effective time of the merger, to increase the authorized number of shares of Hologic common stock from 90,000,000 to 300,000,000 shares;

to approve the issuance of Hologic common stock to Cytyc stockholders in the merger;

to approve the Hologic, Inc. Senior Executive Short-Term Incentive Plan;

to approve the amendment to Hologic s Second Amended and Restated 1999 Equity Incentive Plan; and

if submitted to a vote of Hologic stockholders, to approve an adjournment of the Hologic special meeting, including, if necessary, to solicit additional proxies in favor of any of the foregoing proposals.

Record Date; Votes. Hologic has fixed the close of business on August 22, 2007 as the record date, which is referred to as the Hologic record date, for determining the Hologic stockholders entitled to receive notice of and to vote at the Hologic special meeting. Only holders of record of Hologic common stock on the Hologic record date are entitled to receive notice of and vote at the Hologic special meeting, and any adjournment or postponement thereof.

Each share of Hologic common stock is entitled to one vote. On the Hologic record date, there were approximately [] shares of Hologic common stock entitled to vote at the Hologic special meeting.

Required Vote. The Hologic proposals require different percentages of votes for approval:

the proposal to amend the Hologic charter requires the affirmative vote of a majority of the outstanding shares of Hologic common stock entitled to vote on the proposal;

the proposal to issue shares of Hologic common stock to Cytyc stockholders in the merger, the proposal to approve the Hologic, Inc. Senior Executive Short-Term Incentive Plan, and the proposal to approve the amendment to Hologic s Second Amended and Restated Equity Incentive Plan each require the affirmative vote of a majority of the votes cast in person or by proxy at the Hologic special meeting; and

the proposal to adjourn the Hologic special meeting, including, if necessary, to solicit additional proxies if there are not sufficient votes for the foregoing proposals requires the affirmative vote of a majority of votes cast in person or by proxy, whether or not a quorum is present at the Hologic special meeting.

The proposal to amend the Hologic charter and the proposal to issue shares of Hologic common stock to Cytyc stockholders in the merger are conditioned on one another and the approval of each of these proposals is a condition to the completion of the merger. Neither the amendment to the Hologic charter nor the issuance of the Hologic common stock to Cytyc stockholders in the merger will take place unless both of these proposals are approved by the Hologic stockholders. Therefore, the merger cannot be completed without the approval of both proposals.

Stock Ownership of Hologic Directors and Executive Officers. On August 22, 2007, the Hologic record date, directors and executive officers of Hologic and their respective affiliates owned and were entitled to vote approximately [] shares of Hologic common stock, or approximately []% of the shares of Hologic common stock outstanding on that date. To Hologic s knowledge, the directors and executive officers of Hologic and their respective affiliates intend to vote their shares of Hologic common stock in favor of all Hologic proposals at the Hologic special meeting.

Cytyc Special Meeting (see page 140)

Meeting. The Cytyc special meeting will be held on [], 2007, at [] a.m., local time, at The Hilton Boston Logan Airport, 85 Terminal Road, Boston, Massachusetts 02128. At the Cytyc special meeting, Cytyc stockholders will be asked:

to adopt the merger agreement and the transactions contemplated thereby, including the merger, pursuant to which Cytyc will become a wholly owned subsidiary of Hologic; and

if submitted to a vote of Cytyc stockholders, to approve an adjournment of the Cytyc special meeting, including, if necessary, to solicit additional proxies in favor of the adoption of the merger agreement if there are not sufficient votes for such proposal. *Record Date; Votes.* Cytyc has fixed the close of business on August 22, 2007 as the record date, which is referred to as the Cytyc record date, for determining the Cytyc stockholders entitled to receive notice of and to vote at the Cytyc special meeting. Only holders of record of Cytyc common stock on the Cytyc record date are entitled to receive notice of and vote at the Cytyc special meeting, and any adjournment or postponement thereof.

Each share of Cytyc common stock is entitled to one vote. On the Cytyc record date, there were [] shares of Cytyc common stock entitled to vote at the Cytyc special meeting.

Required Vote. The proposals require different percentages of votes in order to approve them:

the proposal for the adoption of the merger agreement and the transactions contemplated thereby, including the merger, requires the affirmative vote of a majority of the outstanding shares of Cytyc common stock entitled to vote at the Cytyc special meeting; and

the proposal to adjourn the Cytyc special meeting, including, if necessary, to solicit additional proxies in favor of the proposal to adopt the merger agreement, requires the affirmative vote of a majority of the votes cast by stockholders present in person or represented by proxy, whether or not a quorum is present, at the Cytyc special meeting.

Adoption of the merger agreement and the transactions contemplated thereby, including the merger, by Cytyc stockholders is a condition to the completion of the merger.

Stock Ownership of Directors and Executive Officers. On August 22, 2007, the Cytyc record date, directors and executive officers of Cytyc and their respective affiliates owned and were entitled to vote [] shares of Cytyc common stock, or approximately []% of the shares of Cytyc common stock outstanding on that date. To Cytyc s knowledge, the directors and executive officers of Cytyc and their respective affiliates intend to vote their shares of Cytyc common stock in favor of all Cytyc proposals at the Cytyc special meeting.

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Selected Historical Consolidated Financial Data of Hologic

The following tables set forth the selected historical consolidated financial and operating data for Hologic. The selected consolidated statement of income data for the fiscal years ended September 30, 2006, September 24, 2005 and September 25, 2004, and the selected balance sheet data as of September 30, 2006 and September 24, 2005 are derived from Hologic s audited consolidated financial statements incorporated by reference into this joint proxy statement/prospectus. The selected consolidated statement of income data for the fiscal years ended September 27, 2003 and September 28, 2002, and the selected balance sheet data as of September 25, 2004, September 27, 2003 and September 28, 2002 are derived from Hologic s audited consolidated financial statements not included or incorporated by reference into this joint proxy statement/prospectus. The selected consolidated statement of income data for the nine months ended June 30, 2007 and June 24, 2006, and the selected balance sheet data as of June 30, 2007 have been derived from Hologic s unaudited consolidated condensed financial statements incorporated by reference into this joint proxy statement/prospectus. The interim consolidated financial data, in the opinion of Hologic management, reflect all adjustments of a normal recurring nature necessary for a fair statement of Hologic s financial position and results of operations at the dates and for the periods indicated. The results for the nine months ended June 30, 2007 are not necessarily indicative of results that may be expected for any other interim period or the entire fiscal year.

Hologic s historical financial data may not be indicative of the results of operations or financial position to be expected in the future.

You should read this selected historical consolidated financial data of Hologic in conjunction with Hologic s consolidated financial statements and the related notes to those financial statements and the Management s Discussion and Analysis of Financial Condition and Results of Operations section included in Hologic s Annual Report on Form 10-K for the fiscal year ended September 30, 2006 and Hologic s Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2007, which have been filed with the SEC and are incorporated by reference into this joint proxy statement/prospectus.

	Nine N	Months								
	En	ded				Fiscal	Years End	led		
	June 30, 2007	June 24, 2006	September 30, 2006	Sep	2005	•	ember 25, 2004	•	tember 27, 2003	September 28, 2002
					(In thous	sands,	except per	share	e data)	
Consolidated Statement of Income Data										
Revenues:										
Product sales	\$ 457,337	\$ 257,604		\$	229,075	\$	177,936	\$	156,734	\$ 144,684
Service and other revenue	78,467	51,021	74,569		58,609		50,769		47,301	45,508
	535,804	308,625	462,680		287,684		228,705		204,035	190,192
	000,000	,	,				,,,,,,,		,,	-, -,-,-
Costs and Expenses:										
Cost of product sales	193,526	124,642	186,862		116,478		94,762		86,506	84,230
Cost of product sales amortization of intangible										
assets	8,335	2,113	4,784		911		911		911	911
Cost of service and other revenue	85,925	53,491	77,502		58,181		48,574		43,949	34,146
Research and development	33,221	18,288	28,294		18,617		16,659		18,381	20,362
Selling and marketing	61,660	34,838	55,910		34,199		31,761		29,978	28,319
General and administrative	47,738	27,156	42,551		26,667		23,452		21,285	17,997
Amortization of acquired intangible assets	4,145	518	1,631							
Net gain on sale of intellectual property			(5,093)							
Acquired research and development		4,800								
Restructuring and relocation		•	•							2,070
										,
	424.550	265.046	410.241		255.052		016 110		201.010	100.025
	434,550	265,846	412,341		255,053		216,119		201,010	188,035

	Nine M	onths					
	End	ed			Fiscal Years End	ed	
	June 30, 2007	June 24, 2006	September 30, 2006	September 24, 2005	September 25, 2004	September 27, 2003	September 28, 2002
				(In thou	ısands, except per	share data)	
Income from operations	101,254	42,779	50,339	32,631	12,586	3,025	2,157
Interest income	1,630	3,454	4,082	2,219	540	685	573
Interest/other expense	(2,126)	(536)	(1,198)	(155)	(199)	(445)	(2,980)
Income (loss) before provision (benefit) for income taxes and cumulative effect of change in accounting principle Provision (benefit) for income taxes	100,758 38,290	45,697 16,800	53,223 25,800	34,695 6,439	12,927 763	3,265 176	(250) (429)
Income before cumulative effect of	(2.469	20.007	27.422	20.256	12.164	2.000	179
change in accounting principle	62,468	28,897	27,423	28,256	12,164	3,089	1/9
Cumulative effect of change in accounting principle						(207)	
Net income	\$ 62,468	\$ 28,897	\$ 27,423	\$ 28,256	\$ 12,164	\$ 2,882	\$ 179

	_	Nine N End Ine 30, 2007	ded Ju	ne 24, 2006		mber 30, 2006	Sept	tember 24, 2005	Sep	al Years Entember 25, 2004	Sept	tember 27, 2003	Sep	tember 28, 2002
Dagie in come non common and common								(In tho	usana	s, except per	r snare	e data)		
Basic income per common and common equivalent share (1):														
Income before cumulative effect of														
change in accounting principle	\$	1.17	\$	0.64	\$	0.59	\$	0.66	\$	0.30	\$	0.08	\$	0.00
Cumulative effect of change in	Ψ	1.17	φ	0.04	φ	0.59	φ	0.00	φ	0.30	φ	0.08	ψ	0.00
accounting principle												(0.01)		
accounting principie												(0.01)		
NT	ф	1 17	ф	0.64	Φ.	0.50	ф	0.66	Φ.	0.20	ф	0.07	ф	0.00
Net income	\$	1.17	\$	0.64	\$	0.59	\$	0.66	\$	0.30	\$	0.07	\$	0.00
Diluted income per common and common														
equivalent share (1):														
Income before cumulative effect of														
change in accounting principle	\$	1.14	\$	0.61	\$	0.56	\$	0.63	\$	0.29	\$	0.08	\$	0.00
Cumulative effect of change in												(0.04)		
accounting principle												(0.01)		
Net income	\$	1.14	\$	0.61	\$	0.56	\$	0.63	\$	0.29	\$	0.07	\$	0.00
Weighted average number of common														
shares outstanding (1):														
Basic		53,246		45,039		46,512		42,824		40,516		39,258		36,837
Diluted		54,722		47,221		48.620		45,126		42,593		40.261		38,383
Dilucu		34,722		T/,221		40,020		43,120		72,373		40,201		30,303
Consolidated Dalamos Chest Date (-t														
Consolidated Balance Sheet Data (at														
period end) Working capital	¢ 1	84,883			¢ 1	15,743	\$	172,615	\$	118,238	\$	102,699	\$	97,738
Total assets		33,909				56,205	φ	279,839	φ	211,751	φ	188,603	φ	184,147
Line of credit	9	55,707				55,000		417,039		411,731		100,003		104,147
Long-term debt		7,064				6,163				472		1,550		2,268
Total stockholders equity	7	00,060			6	05,750		217,834		166,275		148,927		142,409
Total Stockholders equity	,	00,000			U	05,750		217,034		100,273		170,727		172,707

(1) All share and per share data have been retroactively restated to reflect the 2-for-1 stock split effected on November 30, 2005.

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Selected Historical Consolidated Financial Data of Cytyc

The following tables set forth the selected historical consolidated financial and operating data for Cytyc. The selected consolidated statement of income data for the fiscal years ended December 31, 2006, 2005 and 2004, and the selected balance sheet data as of December 31, 2006 and 2005 are derived from Cytyc s audited consolidated financial statements included in this joint proxy statement/prospectus under Annex B. The selected consolidated statement of income data for the fiscal years ended December 31, 2003 and 2002, and the selected balance sheet data as of December 31, 2004, 2003 and 2002 are derived from Cytyc s selected financial data from its annual report on Form 10-K/A (Amendment No. 2) not included in this joint proxy statement/prospectus. The selected consolidated statement of (loss) income data for the six months ended June 30, 2007 and 2006, and the selected balance sheet data as of June 30, 2007 have been derived from Cytyc s unaudited consolidated condensed financial statements included in this joint proxy statement/prospectus under Annex B. Cytyc s unaudited condensed consolidated financial data, in the opinion of Cytyc management, reflect all adjustments of a normal recurring nature necessary for a fair statement of Cytyc s financial position and results of operations at the dates and for the periods indicated. The results for the six months ended June 30, 2007 are not necessarily indicative of results that may be expected for any other interim period or the entire fiscal year.

Subsequent to the filing of its annual report on Form 10-K for fiscal year ended December 31, 2006, Cytyc restated its consolidated financial statements as a result of certain stock option exercise activities. See Note 15 in the notes to Cytyc s audited consolidated financial statements included in Annex B of this joint proxy statement/prospectus for additional information on the restatement.

Cytyc s historical financial data may not be indicative of the results of operations or financial position to be expected in the future.

You should read this selected historical consolidated financial data of Cytyc in conjunction with Cytyc s consolidated financial statements and the related notes to those financial statements and the Management s Discussion and Analysis of Financial Condition and Results of Operations section included in this joint proxy statement/prospectus under Annex B.

C:	N / 41	T2 3 3
SIX	Months	Enaea

	Jun	e 30,		Years Ended December 31,							
	2007	2006	2006	2005	2004	2003		2002			
							(As				
								(Restatement Adjustments)	(As Restated)		
			(In thousand	s, except pe	r share amo					
Statement of (Loss) Income Data:											
Net Sales	\$ 357,721	\$ 290,937	\$ 608,250	\$ 508,251	\$ 393,593	\$ 303,060	\$ 236,493	\$	\$ 236,493		
Cost of Sales ⁽¹⁾	90,379	62,852	134,184	107,149	82,523	57,420	48,622		48,622		
Gross profit	267,342	228,085	474,066	401,102	311,070	245,640	187,871		187,871		
Operating Expenses:											
Research and development ⁽¹⁾	21,063	20,992	44,134	32,330	20,820	14,724	14,524		14,524		
Sales and marketing ⁽¹⁾	89,352	82,122	161,925	131,346	102,011	79,547	69,971		69,971		
General and administrative ⁽¹⁾	46,490	28,834	63,452	45,298	35,274	28,008	23,125	(17,205)	5,920		
Restructuring ⁽²⁾			2,885								
Arbitration decision ⁽³⁾				7,807							
In-process research and development(4)	89,500				19,100						
Expenses related to terminated merger ⁽⁵⁾							5,705		5,705		
Total operating expenses	246,405	131,948	272,396	216,781	177,205	122,279	113,325	(17,205)	96,120		

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Six Months Ended

	June 30, Years Ended December 31, 2007 2006 2006 2005 2004 2003				2002													
														•		statement ustments)		(As estated)
		20.025		06.405			tho	ousands, ex	_	•				- 1 - 1 c		45.005		04.554
Income from operations		20,937		96,137		201,670		184,321		133,865		123,361		74,546		17,205		91,751
Other income (expense), net ⁽⁶⁾		(2,056)		(5)		13,002		(5,603)		(3,468)		2,622		2,711				2,711
Income before provision for income																		
taxes		18,881		96,132		214,672		178,718		130,397		125,983		77,257		17,205		94,462
Provision for income taxes		36,550		35,088		75,135		65,232		56,809		49,763		29,363		3,699		33,062
Net (loss) income	\$	(17,669)		61.044	\$	139,537	\$	113,486	\$	73,588	\$	76,220	\$	47,894	\$	13,506	\$	61,400
Net (loss) income per common and potential common share: Basic	\$	(0.15)	\$	0.53	\$	1.22	\$	1.00	\$	0.66	\$	0.69	\$	0.40	\$	0.11	\$	0.51
Diluted	\$	(0.15)	\$	0.51	\$	1.16	\$	0.94	\$	0.63	\$	0.68	\$	0.39	\$	0.11	\$	0.50
Weighted average common and potential common shares outstanding:																		
Basic		115,197		114,917		114,009		113,528		111,148		110,983		120,114				120,114
Diluted		115,197		125,014		123,759		125,446		121,922		112,807		122,782				122,782
Balance Sheet Data: Cash, cash equivalents and investment																		
securities	\$	33.323			\$	297,710	\$	220,619	6 /	232,295	Ф	177,897	Ф	163,744	Ф		Ф	163,744
Total assets ⁽⁷⁾		1,302,818			-	1,164,714		1,039,879		809,350		390,900		361,626	φ	1,563		363,189
		250,000				250,000		250,000		250,000		590,900		501,020		1,505		505,109
Long-term debt												252 (21		224 720		1.562		226 201
Total stockholders equit (§)		791,339				758,973		628,351	- 4	487,445		353,631		324,728		1,563		326,291

⁽¹⁾ During the six months ended June 30, 2007 and in fiscal year 2006, Cytyc incurred stock-based compensation expense under SFAS No. 123R (see Note 8 in the notes to the Cytyc interim condensed consolidated financial statements (unaudited) and Note 9 in the notes to the Cytyc consolidated financial statements included in Annex B of this joint proxy statement/prospectus starting on page B-F-2).

- (3) Cytyc incurred a charge in connection with the DEKA Products Limited Partnership arbitration panel decision in the first quarter of 2005.
- (4) During the six months ended June 30, 2007, Cytyc incurred in-process research and development charges totaling approximately \$43.5 million and \$46.0 million related to its acquisition of Adeza Biomedical Corporation and Adiana Inc., respectively, and in fiscal year 2004, approximately \$19.1 million related to its acquisition of Novacept.
- (5) Cytyc incurred charges totaling approximately \$5.7 million in 2002 related to its terminated merger with Digene Corporation.

⁽²⁾ Cytyc incurred a charge during the fourth quarter of 2006 for severance resulting from its planned transition of its Mountain View, California operations to its operations in Costa Rica and Massachusetts.

⁽⁶⁾ Other income (expense), net includes a gain on sale of Vision Systems Limited shares of \$13.1 million in 2006, including a realized foreign currency gain of \$1.9 million related to this transaction.

(7) See Note 15 in the notes to the Cytyc consolidated financial statements included in Annex B of this joint proxy statement/prospectus starting on page B-F-2 for an explanation of the restatement of Cytyc s consolidated financial statements as a result of certain stock option exercise activities. This restatement affected the statement of income in 2002 presented above, as well as certain balance sheet data (i.e., additional paid-in capital and retained earnings, with no change to total stockholders equity, as of December 31, 2006, 2005, 2004 and 2003 and deferred tax assets and total stockholders equity as of December 31, 2002) also presented above, primarily to reflect the impact of the restatement on the statements of (loss) income in the years ended December 31, 1996 through 2001, which are not presented above.

(8) Cytyc has not issued dividends in any period presented.

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Summary Unaudited Pro Forma Financial Data

The following unaudited pro forma statements of operations data for the fiscal year ended September 30, 2006 and the nine months ended June 30, 2007 reflect the merger as if it had occurred on September 25, 2005. The following unaudited pro forma balance sheet data at June 30, 2007 reflect the merger as if it had occurred on that date. Such pro forma financial data is based on the historical financial statements of Hologic and Cytyc and gives effect to the merger under the purchase method of accounting for business combinations. As a result, the pro forma financial information is based on certain assumptions and adjustments as discussed in the section titled Unaudited Pro Forma Condensed Combined Financial Information , including assumptions relating to the consideration paid and the allocation thereof for the assets and liabilities of Cytyc based on preliminary estimates of their fair value. The following should be read in connection with the sections titled Unaudited Pro Forma Condensed Combined Financial Information, and other information included in or incorporated by reference into this joint proxy statement/prospectus. Actual financial statement information in the future may be materially different from the pro forma financial information presented below.

	Year Ended	Nine Months Ended
Statement of Operations Data	September 30, 2006 (In thousands, ex	June 30, 2007 except per share data)
Revenue	\$ 1,184,573	\$ 1,082,133
Income from operations	\$ 124,590	\$ 161,410
Net income (loss)	\$ (22,975)	\$ 27,895
Net income (loss) per common and common equivalent share:		
Basic	\$ (0.20)	\$ 0.24
Diluted	(0.20)	0.23
Weighted average number of common shares outstanding:		
Basic	117,040	118,384
Diluted	117,040	119,860
		As of
Balance Sheet Data		June 30, 2007 (In thousands)
Working Capital		\$ 284,573
Total Assets		\$ 7,905,205
Long-term Debt		\$ 2,125,109
Stockholder s Equity		\$ 4,335,284

Equivalent and Comparative Per Share Information

We present below per common share data regarding the income (loss) and book value of Hologic and Cytyc on both historical and unaudited pro forma condensed combined bases and on a per share equivalent unaudited pro forma condensed combined basis for Cytyc. We have derived the unaudited pro forma condensed combined financial statements presented elsewhere in this joint proxy statement/prospectus. You should read the information below in conjunction with the financial statements and accompanying notes of Hologic that are incorporated by reference into this joint proxy statement/prospectus, with the financial statements and accompanying notes of Cytyc that are presented elsewhere in this joint proxy statement/prospectus under Annex B and with the unaudited pro forma condensed combined information included under the section entitled Unaudited Pro Forma Condensed Combined Financial Statements. Actual financial statement information in the future may be materially different from the pro forma financial information presented below.

Hologic Per Share Data:

	As o	f and for		
	Fiscal Year Ended	Nine Mo	e Months Ended	
	September 30, 2006	June	30, 2007	
Basic Net Income (Loss) per Common Share				
Historical	\$ 0.59	\$	1.17	
Pro Forma	(0.20)		0.24	
Diluted Net Income (Loss) per Common Share				
Historical	\$ 0.56	\$	1.14	
Pro Forma	(0.20)		0.23	
Cash Dividends				
Historical	\$	\$		
Pro Forma				
Book Value per Common Share				
Historical	\$ 11.51	\$	12.97	
Pro Forma			36.41	
Cytyc Per Share Data:				

	As o	of and for		
	Fiscal Year Ended	Six Mo	ix Months Ended	
	December 31, 2006	June	30, 2007	
Basic Net Income (Loss) per Common Share:				
Historical	\$ 1.22	\$	(0.15)	
Equivalent Pro Forma	(0.10)		0.12	
Diluted Net Income (Loss) per Common Share:				
Historical	\$ 1.16	\$	(0.15)	
Equivalent Pro Forma	(0.10)		0.12	
Cash Dividends				
Historical	\$	\$		
Equivalent Pro Forma				
Book Value per Common Share				
Historical	\$ 6.62	\$	6.79	
Equivalent Pro Forma			18.93	

COMPARATIVE PER SHARE MARKET PRICE AND DIVIDEND INFORMATION

Shares of Hologic common stock and shares of Cytyc common stock are both currently listed and principally traded on the Nasdaq Global Select Market. Hologic common stock is listed for trading under the symbol HOLX and Cytyc common stock is listed for trading under the symbol CYTC. The following table sets forth, for the periods indicated, the high and low sales prices per share of Hologic common stock and Cytyc common stock as reported on the Nasdaq Global Select Market and its predecessor, the Nasdaq National Market.

Hologic:

Fiscal Year Ended September 24, 2005	High	Low
First Quarter	\$ 14.50	\$ 8.89
Second Quarter	19.42	12.31
Third Quarter	20.36	14.77
Fourth Quarter	27.40	18.34
Fiscal Year Ended September 30, 2006	High	Low
First Quarter	\$ 40.01	\$ 34.52
Second Quarter	55.61	35.26
Third Quarter	56.71	35.36
Fourth Quarter	50.70	38.07
Fiscal Year Ended September 29, 2007	High	Low
First Quarter	\$ 52.34	\$41.94
Second Quarter	60.24	45.88
Third Quarter	63.18	50.96
Fourth Quarter (through September 4, 2007)	58.32	47.51
c :		

Fiscal Year Ended December 31, 2005	High	Low
First Quarter	\$ 27.78	\$ 21.02
Second Quarter	24.50	19.83
Third Quarter	27.50	21.26
Fourth Quarter	29.60	23.76
Fiscal Year Ended December 31, 2006	High	Low
First Quarter	\$ 30.77	\$ 26.64
Second Quarter	28.34	23.80
Third Quarter	25.63	22.79
Fourth Quarter	29.17	22.88
Fiscal Year Ended December 31, 2007	High	Low
First Quarter	\$ 34.85	\$ 27.80
Second Quarter	44.62	34.02
Third Quarter (through September 4, 2007)	45.10	39.30

The table below sets forth the closing sale prices of Hologic common stock and Cytyc common stock as reported on the Nasdaq Global Select Market, each on May 18, 2007, the last trading day prior to the public announcement of the transaction, and on [], 2007. The table also shows the implied value of one share of Cytyc common stock, which was calculated by multiplying the closing price of Hologic common stock on those dates by the exchange ratio of 0.52 and then adding to this amount \$16.50 per share for the cash portion of the merger consideration. The market prices of Hologic and Cytyc common stock likely will fluctuate between the date of this joint proxy statement/prospectus and the time of the special meetings and the completion of the merger. No assurance can be given concerning the market prices of Hologic common stock or Cytyc common stock before the completion of the merger or the market price of Hologic common stock after the completion of the merger. The merger consideration is fixed in the merger agreement and will not be adjusted for changes in the market value of the common stock of Hologic or Cytyc. One result of this is that the market value of the Hologic common stock that Cytyc stockholders will receive in the merger may vary significantly from the prices shown in the table below.

					Impl	ied Value	
	C	Cytyc		logic	of Cytyc		
	Comm	on Stock	Comm	on Stock	Com	non Stock	
May 18, 2007	\$	35.05	\$	57.61	\$	46.46	
[], 2007	\$	1	\$ [1	\$	[]	

Cytyc stockholders should obtain current market prices for shares of Hologic common stock and Cytyc common stock in deciding whether to vote for the adoption of the merger agreement and the transactions contemplated thereby, including the merger. Hologic stockholders should obtain current market prices for shares of Hologic and Cytyc common stock in deciding whether to vote for the approval of the amendment to the Hologic charter to increase the number of authorized shares of Hologic common stock and the issuance of Hologic common stock to Cytyc stockholders in the merger.

Dividends

Hologic has never declared or paid cash dividends on its capital stock and does not plan to pay any cash dividends in the foreseeable future. Hologic s current policy is to retain all of its earnings to finance future growth. In addition, Hologic s \$150 million credit facility with Bank of America N.A., as administrative agent, prohibits it from declaring or paying any cash dividends. The proposed new credit facilities expected to be obtained by Hologic in connection with the merger will also contain restrictions on the payment of dividends following the merger.

Cytyc has never declared nor paid cash dividends on its capital stock and does not expect to pay any cash dividends in the foreseeable future.

RISK FACTORS

In addition to the other information included in or incorporated by reference into this joint proxy statement/prospectus, including the matters addressed in Cautionary Statement Regarding Forward-Looking Statements below and the additional risks relating to Cytyc included in Annex B of this joint proxy statement/prospectus under the heading Information about Cytyc Risk Factors, you should carefully consider the following risk factors before deciding whether to vote for the adoption of the merger agreement and the transactions contemplated thereby, including the merger, in the case of Cytyc stockholders, or for the amendment to the Hologic charter or the issuance of shares of Hologic common stock in the merger, in the case of Hologic stockholders. If any of the risks described below, elsewhere in this joint proxy statement/prospectus or in the periodic reports incorporated by reference into this joint proxy statement/prospectus actually occurs, the respective businesses, financial results, financial condition, operating results or stock prices of Hologic, Cytyc or the combined company could be materially adversely affected. See Where You Can Find More Information, beginning on page 197 and Annex B, Information about Cytyc Risk Factors.

RISKS RELATED TO THE MERGER

Because the market price of Hologic common stock may fluctuate, and the closing date of the merger is not yet ascertainable, Cytyc stockholders cannot be certain of the precise value of the merger consideration they will receive in the merger.

Upon completion of the merger, each share of Cytyc common stock outstanding immediately prior to the merger will be cancelled and converted into the right to receive merger consideration equal to 0.52 of a share of Hologic common stock and \$16.50 in cash. The merger consideration is fixed and will not be adjusted due to any increases or decreases in the price of Hologic common stock or Cytyc common stock. However, the value of Hologic common stock to be received by Cytyc stockholders in the merger will depend upon the market price of a share of Hologic common stock upon the completion of the merger. Therefore, if the price of Hologic common stock declines, Cytyc stockholders will receive less value for their shares upon the completion of the merger than the implied value of the merger consideration calculated on the date the merger agreement was signed or on the date of the Cytyc special meeting.

Stock price changes may result from a variety of factors, including, but not limited to:

changes in the business, operations or prospects of Hologic or Cytyc;

catastrophic events, both natural and man-made;

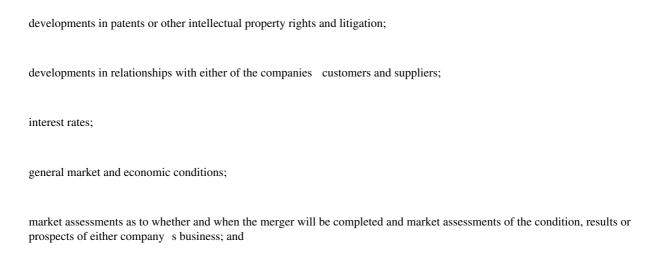
governmental, litigation and regulatory developments or considerations;

quarterly fluctuations in either of the companies actual or anticipated operating results;

announcements of technological innovations;

new products or product enhancements by either of the companies or their respective competitors;

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changes in reimbursement rates.

Stockholders of Hologic and Cytyc are urged to obtain current market prices for Hologic and Cytyc common stock when they consider whether to approve the proposals required to complete the merger at their respective special meetings.

Failure to complete the merger could negatively impact the stock prices and the future business and financial results of Hologic and Cytyc.

If the merger is not completed, the ongoing businesses of Hologic or Cytyc may be adversely affected and Hologic and Cytyc will be subject to several risks, including the following:

being required, under certain circumstances under the merger agreement, to pay a termination fee of between \$50 million and \$150 million, in the case of a payment by Cytyc to Hologic, or between \$33 million and \$100 million, in the case of a payment by Hologic to Cytyc;

having to pay significant costs relating to the merger, such as legal, accounting, financial advisor and printing fees;

the attention of management of Hologic and Cytyc will have been diverted to the merger instead of on such company s own operations and pursuit of other opportunities that could have been beneficial to such company; and

customer perception may be negatively impacted which could affect the ability of Hologic and Cytyc to compete for, or to win, new and renewal business in the marketplace.

Obtaining required approvals and satisfying closing conditions may delay or prevent completion of the merger or reduce the anticipated benefits of the merger.

Completion of the merger is conditioned upon the receipt of all material governmental authorizations, consents, orders and approvals, including the expiration or termination of the applicable waiting periods under the HSR Act. Hologic and Cytyc intend to pursue all required approvals in accordance with the merger agreement. If the companies do not receive these approvals, or do not receive them on terms that satisfy the conditions set forth in the merger agreement, then neither company will be obligated to complete the merger. On July 2, 2007, the waiting period under the HSR Act expired without a request for additional information.

The governmental agencies from which the companies will seek these approvals have broad discretion in administering the governing regulations. As a condition to approval of the merger, agencies may impose requirements, limitations or costs or require divestitures or place

restrictions on the conduct of the combined company s business. These requirements, limitations, costs, divestitures or restrictions could jeopardize or delay the completion of the merger or may reduce the anticipated benefits of the merger. Further, no assurance can be given that the required consents and approvals will be obtained or that the required conditions to closing will be satisfied, and, if all required consents and approvals are obtained and the conditions to the completion of the merger are satisfied, no assurance can be given as to the terms, conditions and timing of the approvals.

The combined company may be unable to successfully integrate Hologic s and Cytyc s operations or to realize the anticipated cost savings, revenues and other benefits of the merger. As a result, the value of the combined company s common stock may be adversely affected.

Hologic and Cytyc entered into the merger agreement because each company believes that the merger will be beneficial to each of Hologic, Cytyc and their respective stockholders. Currently, each company operates as an independent public company. Achieving the anticipated benefits of the merger will depend in part upon whether the two companies integrate their businesses in an efficient and effective manner. The companies may not be able to accomplish this integration process smoothly or successfully. The necessity of coordinating geographically separated organizations, systems and facilities and addressing possible differences in business backgrounds, corporate cultures and management philosophies may increase the difficulties of integration. The companies operate numerous systems, including those involving management information, purchasing, accounting and finance, sales, billing, employee benefits, payroll and regulatory compliance. The integration of certain operations following the merger will require the dedication of significant management resources, which may temporarily distract management s attention from the day-to-day business of the combined company. Employee uncertainty and lack of focus during the integration process may also disrupt the business of the combined company and result in undesired employee attrition. Any inability of management to successfully integrate the operations of the two companies could have a material adverse effect on the business and results of operations of the combined company. The companies may not be able to achieve the anticipated operating and cost synergies or long-term strategic benefits of the merger. An inability to realize the full extent of, or any of, the anticipated benefits of the merger, as well as any delays encountered in the integration process, could have an adverse effect on the business and results of operations of the combined company, which may affect the value of the shares of the combined company s common stock after the completion of the merger.

Due to legal restrictions, Cytyc and Hologic have been able to conduct only limited planning regarding the integration of the two companies following the merger and have not yet determined the exact nature of how the businesses and operations of the two companies will be combined after the merger. The actual integration may result in additional and unforeseen expenses, and the anticipated benefits of the integration plan may not be realized.

The combined company will incur significant transaction and merger-related costs in connection with the merger.

Hologic and Cytyc expect to incur significant costs associated with combining the operations of the two companies. The substantial majority of the expenses resulting from the merger will be comprised of transaction costs related to the merger, systems consolidation costs, and business integration and employment related costs. Hologic and Cytyc will also incur transaction fees and costs related to formulating integration plans. Additional unanticipated costs may be incurred in the integration of the two companies businesses. Due to legal restrictions, Cytyc and Hologic have been able to conduct only limited planning regarding the integration of the two companies and have not yet been able to formulate detailed integration plans to deliver anticipated synergies. Although Hologic and Cytyc expect that the elimination of duplicative costs, as well as the realization of other efficiencies related to the integration of the businesses, should allow them to offset incremental transaction and merger-related costs over time, this net benefit may not be achieved in the near term, or at all.

Whether or not the merger is completed, the announcement and pendency of the merger could impact or cause disruptions in Cytyc s and Hologic s businesses, which could have an adverse effect on their results of operations and financial condition.

Specifically:

current and prospective customers and suppliers of Hologic and Cytyc may experience uncertainty associated with the merger, including with respect to current or future business relationships with Hologic, Cytyc or the combined company and may attempt to negotiate changes in existing business

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relationships or consider entering into business relationships with parties other than Hologic, Cytyc or the combined company, either before or after completion of the merger;

Cytyc and Hologic employees may experience uncertainty about their future roles with the combined company, which might adversely affect Cytyc s and Hologic s ability to retain and hire key employees;

if the merger is completed, the accelerated vesting of stock options and other equity-based awards and payment of change in control benefits to some members of Cytyc s and Hologic s management on completion of the merger could result in increased difficulty or cost in retaining Cytyc s and Hologic s officers and employees; and

the attention of management of each of Cytyc and Hologic may be directed toward the completion of the merger and transaction-related considerations and may be diverted from the day-to-day business operations of their respective companies. Certain directors and executive officers of Hologic and Cytyc have interests that may be different from, or in addition to, interests of Hologic and Cytyc stockholders generally.

Some directors and executive officers of Hologic and Cytyc may have interests that differ from yours. For example, some directors and executive officers have employment, indemnification and severance arrangements, rights to acceleration of stock options and other equity-based awards, and other benefits they may receive on a change in control of Hologic or Cytyc, as the case may be, that provide them with interests in the merger that may be different from yours. You should be aware of these interests when you consider your board of directors recommendation that you vote in favor of the proposals submitted at your stockholder meeting.

The deal-protection provisions of the merger agreement may deter alternative business combinations and could negatively impact the stock prices of Hologic and Cytyc if the merger agreement is terminated.

As a result of certain provisions of the merger agreement, it is possible that a third party who might be interested in pursuing a business combination proposal with Hologic or Cytyc would be discouraged from doing so. Any such proposal might be advantageous to the stockholders of Hologic and Cytyc when compared to the terms and conditions of the transaction described in this joint proxy statement/prospectus. In particular, the termination fee provision of the merger agreement may deter third parties from proposing alternative business combinations that might result in greater value to Hologic and Cytyc stockholders than the merger. In addition, in the event the merger agreement is terminated by Hologic or Cytyc in circumstances that obligate either party to pay a termination fee to the other party, Hologic s or Cytyc s stock price may decline as a result of its payment of the termination fee.

The merger is expected to have a dilutive effect on Hologic s earnings per share calculated in accordance with U.S. GAAP, which may adversely affect the market price of Hologic s common stock following the merger.

The merger is expected to have a dilutive effect on earnings per share of Hologic calculated in accordance with U.S. GAAP primarily due to the amortization of the intangible assets in connection with the merger. These expectations are based on preliminary estimates which may materially change after the completion of the merger. The combined company could also encounter additional transaction and integration-related costs or other factors such as the failure to realize all of the benefits anticipated in the merger. All of these factors could cause further dilution to the earnings per share of the combined company or cause a decrease in the price of common stock of the combined company.

Charges to earnings resulting from the application of the purchase method of accounting may adversely affect the market value of the combined company s common stock following the merger.

In accordance with U.S. GAAP, Hologic will be considered the acquirer of Cytyc for accounting purposes. Hologic will account for the merger using the purchase method of accounting, which will result in charges to the combined company's earnings that could adversely affect the market value of Hologic's common stock following the completion of the merger. Under the purchase method of accounting, Hologic will allocate the total purchase price to the assets acquired and liabilities assumed from Cytyc based on their fair values as of the date of the effective time of the merger, and record any excess of the purchase price over those fair values as goodwill. For certain tangible and intangible assets, recording their fair values as of the completion date of the merger will result in the combined company incurring significant additional depreciation and/or amortization expense that exceed the combined amounts recorded by Hologic and Cytyc prior to the merger. This increased expense will be recorded by the combined company over the useful lives of the underlying assets. In addition, to the extent the value of goodwill or intangible assets were to become impaired, the combined company may be required to incur charges relating to the impairment of those assets.

RISKS RELATED TO INDEBTEDNESS OF THE COMBINED COMPANY

Hologic will incur significant indebtedness in order to finance the merger, which will limit the combined company s operating flexibility, and could adversely affect the combined company s operations and financial results and prevent the combined company from fulfilling its obligations.

In order to finance the cash portion of the merger consideration and other expenses incurred in connection with the merger, Hologic intends to incur up to approximately \$2.55 billion of new indebtedness, including approximately \$250 million under a five year senior secured tranche A term loan facility, \$850 million under a 5.5 year senior secured tranche B term loan facility, approximately \$1.25 billion under an 18 month senior secured capital markets term loan facility and up to \$200 million of additional indebtedness under its proposed new five year revolving credit facility. Additionally, certain other of Hologic s and Cytyc s current indebtedness may remain outstanding. These new credit facilities are anticipated to bear interest at variable rates to be determined. This level of indebtedness may:

make it more difficult for the combined company to satisfy its obligations with respect to its outstanding indebtedness;