UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 8-K

Current Report

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **May 5, 2011**

CYTORI THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-34375**	**33-0827593**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification Number)

3020 Callan Road, San Diego, California 92121
(Address of principal executive offices, with zip code)

(858) 458-0900
(Registrant's telephone number, including area code)

n/a
(Former name or former address, if changed since last report)

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

□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

□ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

□ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

□ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.02 Results of Operations and Financial Condition

On May 5, 2011 Cytori Therapeutics, Inc. (Company) issued a press release announcing its financial results for the first quarter ended March 31, 2011. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference. In addition, on the same date, the Company has posted further insight into those results of operations in an open letter to its stockholders and other interested parties in the Investor Relations section of its website. A copy of the letter is attached hereto as exhibit 99.2.

The information disclosed under this Item 2.02 in this report, including Exhibits 99.1 and 99.2 hereto, are being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, except as expressly set forth in such filing.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	Description
99.1	Cytori Therapeutics, Inc. Press Release, dated May 5, 2011*
99.2	Cytori Therapeutics, Inc. Shareholder Letter, dated May 5, 2011*

* Exhibits 99.1 and 99.2 hereto are being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, except as expressly set forth in such filing.

SIGNATURES

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

CYTORI THERAPEUTICS, INC.

Date: May 5, 2011

By: /s/ Mark E. Saad
Mark E. Saad
Chief Financial Officer

May 5, 2011

Cytori Provides Update on Product Pipeline Developments and Reports First Quarter Results

San Diego – Cytori Therapeutics, Inc. (NASDAQ: CYTX) provides a quarterly update on its development pipeline and reports financial results for the first quarter of 2011.

Cytori is developing and commercializing unique devices designed to address multiple therapeutic areas, with an initial focus on cardiovascular disease, breast reconstruction and aesthetics. More than 3,000 patients are estimated to have been treated worldwide with the Company's products and there are now 162 revenue-generating units across 29 countries. Some specific accomplishments during the first quarter and year-to-date include:

- Secured an expedited process with onsite review for obtaining chronic myocardial ischemia indications-for-use in Europe;
- Initiated the ADVANCE pivotal European heart attack study, with the first site now enrolling and treating;
- Reported top-line 12-month results from RESTORE 2 showing sustained high levels of patient and physician satisfaction;
- Expanded efforts to obtain European healthcare system coverage for breast reconstruction;
- Submitted multiple 510(k) applications to the FDA;
- Initiated preparations for a pre-IDE meeting with the FDA for a US chronic myocardial ischemia clinical trial;
- Hired an experienced leader as Executive VP of Marketing and Sales, Clyde Shores, to lead global commercialization efforts; and
- Elected Tommy Thompson, former governor and HHS Secretary, to the Board of Directors and named Lloyd Dean as Chairman.

"We are building our organization for long-term growth," said Christopher J. Calhoun, chief executive officer of Cytori. "Our cardiovascular disease pipeline is accelerating with a European marketing application under review, a pivotal clinical trial is treating patients, and US cardiac clinical trial preparations are in process. Regulatory claims, clinical data and reimbursement progress are now coming together to support our drive for accelerated sales growth for reconstructive surgery and aesthetics. Upcoming milestones include announcing 18-month APOLLO outcomes and complete RESTORE 2 data, Celution® One approval in Europe, US regulatory clearance and accelerating revenue growth year over year."

Financials:

Total revenues for the first quarter of 2011 were $2.6 million compared to $4.4 million in the first quarter of 2010, including $1.4 million and $2.3 million in product sales in 2011 and 2010, respectively. During the first quarter of 2011, Cytori recognized $1.2 million in development revenues related to the Olympus-Cytori Joint Venture associated with the achievement of commencing manufacturing for the Celution® One System, as compared to $2.1 million in the first quarter 2010.

Quarterly revenue and gross margin variability is expected at this stage. First quarter 2011 revenues in particular were affected by the events in Japan. Notably, 72% of first quarter 2010 sales came from Japan and included a StemSource® Cell Bank. By comparison, 30% of product sales in the first quarter of 2011 came from Japan and there was no corresponding bank sale. In contrast, both European and US revenues in the first quarter grew substantially year over year. For 2011, the Company's guidance for accelerated revenue growth remains unchanged.

Cytori ended the first quarter of 2011 with 162 revenue generating units compared to 149 reported at year end 2010. The Company shipped 241 consumables, including 131 reorders, during the first quarter of 2011. This compares to 342 consumables shipped, including 261 re-orders in the first quarter of 2010 and 437 consumables shipped, including 350 reorders in the fourth quarter of 2010. In addition, Cytori fulfilled orders for 843 PureGraft™ units in the first quarter.

Total operating expenses before non-cash items of change in fair value of warrants and options liabilities were approximately $9.8 million, compared to $9.6 million in the fourth quarter of 2010 and $7.5 million in the first quarter of 2010. First quarter expenses included costs associated with the initiation of the ADVANCE trial, and cash was used for the purchase of Celution® One devices to be installed at trial centers, a stocking order for the proprietary Celase® reagent, and a substantial pay down of accounts payable.

Cytori ended the quarter with $42.6 million in cash and cash equivalents, plus $1.8 million in accounts receivable. Subsequent to the end of the quarter, Cytori added $1.6 million of cash from the exercise of warrants.

Conference Call Information and Shareholder Letter

Cytori will host a conference call and question and answer session at 5:00 p.m. Eastern Time today to further discuss these results. The audio webcast of the conference call may be accessed under "Webcasts" in the Investor Relations section of Cytori's website (www.cytori.com). The webcast will be available live and by replay two hours after the call and archived for one year. More information on our commercial and clinical progress is posted online in the 'May 2011 Shareholder Letter' at http://ir.cytoritx.com.

About Cytori

Cytori is a leader in providing patients and physicians around the world with medical technologies that harness the potential of adult regenerative cells from adipose tissue. The Celution® System family of medical devices and instruments is being sold into the European and Asian cosmetic and reconstructive surgery markets but is not yet available in the United States. Our StemSource® product line is sold globally for cell banking and research applications. Our PureGraft™ products are available in North America and Europe for fat grafting procedures. www.cytori.com

Cautionary Statement Regarding Forward-Looking Statements

This press release includes forward-looking statements regarding events, trends and business prospects, which may affect our future operating results and financial position. Such statements, including, but not limited to, those regarding our belief in our ability to continue to accelerate sales and revenue growth, continue progress in development of our cardiovascular disease pipeline, continue progress in achieving expanded indications-for-use in Europe of Celution® System in chronic myocardial ischemia, achieve product reimbursement for breast reconstruction in Europe, address multiple therapeutic areas with our device, our efforts to commence a U.S. chronic myocardial ischemia clinical study, the future launch of the Celution® One system in Europe, and our efforts to strengthen our global sales and marketing team, are all subject to risks and uncertainties that could cause our actual results and financial position to differ materially. Some of these risks and uncertainties include, but are not limited to, risks related to our history of operating losses, the need for further financing and our ability to access the necessary additional capital for our business, the quality and effectiveness of our products, the effectiveness of our regulatory and sales and marketing programs, the quality and acceptance of our clinical data, dependence on third party performance and the risk of natural disasters and other occurrences that may disrupt the normal business cycles in areas of our global operations, as well as other risks and uncertainties described under the "Risk Factors" section in Cytori's Securities and Exchange Commission Filings on Form 10-K and Form 10-Q. We assume no responsibility to update or revise any forward-looking statements to reflect events, trends or circumstances after the date they are made.

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CONTACT:
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Consolidated Condensed Balance Sheet
(Unaudited)

	As of March 31, 2011	As of December 31, 2010
Assets		
Current assets:		
Cash and cash equivalents	$ 42,647,000	$ 52,668,000
Accounts receivable, net of reserves of $378,000 and $306,000 in 2011 and 2010, respectively	1,774,000	2,073,000
Inventories, net	3,552,000	3,378,000
Other current assets	964,000	834,000
Total current assets	48,937,000	58,953,000
Property and equipment, net	1,773,000	1,684,000
Restricted cash and cash equivalents	350,000	350,000
Investment in joint venture	413,000	459,000
Other assets	1,488,000	566,000
Intangibles, net	358,000	413,000
Goodwill	3,922,000	3,922,000
Total assets	$ 57,241,000	$ 66,347,000
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 5,916,000	$ 6,770,000
Current portion of long-term obligations	8,724,000	6,453,000
Total current liabilities	14,640,000	13,223,000
Deferred revenues, related party	4,281,000	5,512,000
Deferred revenues	4,919,000	4,929,000
Warrant liability	8,458,000	4,987,000
Option liability	880,000	1,170,000
Long-term deferred rent	386,000	398,000
Long-term obligations, net of discount, less current portion	11,321,000	13,255,000
Total liabilities	44,885,000	43,474,000
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; -0- shares issued and outstanding in 2011 and 2010	-	-
Common stock, $0.001 par value; 95,000,000 shares authorized; 52,134,367 and 51,955,265 shares issued and 52,134,367 and 51,955,265 shares outstanding in 2011 and 2010, respectively	52,000	52,000
Additional paid-in capital	234,374,000	232,819,000
Accumulated deficit	(222,070,000)	(209,998,000)
Total stockholders' equity	12,356,000	22,873,000
Total liabilities and stockholders' equity	$ 57,241,000	$ 66,347,000

Consolidated Condensed Statements of Operations and Comprehensive Loss
(Unaudited)

	For the Three Months Ended March 31,	
	2011	**2010**
Product revenues:		
Related party	$ -	$ -
Third party	1,362,000	2,266,000
	1,362,000	2,266,000
Cost of product revenues	842,000	930,000
Gross profit	520,000	1,336,000
Development revenues:		
Development, related party	1,231,000	2,122,000
Research grants and other	4,000	21,000
	1,235,000	2,143,000
Operating expenses:		
Research and development	3,047,000	2,245,000
Sales and marketing	3,226,000	1,999,000
General and administrative	3,544,000	3,218,000
Change in fair value of warrants	3,471,000	(2,167,000)
Change in fair value of option liability	(290,000)	260,000
Total operating expenses	12,998,000	5,555,000
Operating loss	(11,243,000)	(2,076,000)
Other income (expense):		
Interest income	2,000	1,000
Interest expense	(738,000)	(276,000)
Other expense, net	(47,000)	(75,000)
Equity loss from investment in joint venture	(46,000)	(21,000)
Total other income (expense)	(829,000)	(371,000)
Net loss	$ (12,072,000)	$ (2,447,000)
Basic and diluted net loss per common share	$ (0.23)	$ (0.06)
Basic and diluted weighted average common shares	51,994,708	42,281,381

May 2011 Shareholder Letter

Dear Shareholders,

We estimate that more than 3,000 patients have been treated worldwide with our products. There are now 162 revenue producing systems around the world across 29 countries. This combined clinical and commercial experience along with our device-based razor and razor-blade business model distinguishes Cytori as a leader in the emerging sector of cell based therapy. We are already making great progress in 2011 having achieved the following milestones:

- Secured an expedited process with on-site review for obtaining chronic myocardial ischemia indications-for-use in Europe;
- Initiated the ADVANCE pivotal European heart attack study, with the first site now enrolling and treating;
- Reported top-line 12-month results from RESTORE 2 showing sustained high levels of patient and physician satisfaction;
- Expanded efforts to obtain European healthcare system coverage for breast reconstruction;
- Submitted multiple 510(k) applications to the FDA;
- Initiated preparations for a pre-IDE meeting with the FDA for a US chronic myocardial ischemia clinical trial;
- Hired an experienced leader as Executive VP of Marketing and Sales, Clyde Shores, to lead global commercialization efforts; and
- Elected Tommy Thompson, former governor and HHS Secretary, to the Board of Directors and named Lloyd Dean as Chairman.

Our progress is focused and significant. We are building a global organization for growth and scale as we move our products into targeted markets. We believe current revenues will continue to be variable, and despite quarterly volatility and certain unexpected events as we experienced in Japan, we remain unchanged in our expectation to achieve accelerated revenue growth for the full year in 2011.

Cardiovascular Disease

Our first priority in the cardiovascular disease pipeline is to seek European indication-for-use on the Celution® System to treat no-option chronic myocardial ischemia patients. We have secured an expedited “On-site Review” process, to evaluate the clinical data from the PRECISE trial. As part of this process, our Notified Body’s clinical and technical reviewers will be on-site at our headquarters later this month. As a result, we believe we are on track for a formal decision sometime later this year or early 2012. In parallel, we are actively evaluating targeted European markets, reimbursement opportunities and conducting associated commercial preparations to enter this market.

The ADVANCE European pivotal acute heart attack trial is active, patients are being treated and enrollment is underway. We have received ethical committee approval in additional countries and with new hospitals. By the end of the third quarter we expect to have up to five trial centers enrolling patients. Full enrollment in this trial is currently scheduled to be completed in the first half of 2013.

Breast Reconstruction

Top-line 12-month results from the 71 patient RESTORE 2 breast reconstruction study were reported during the first quarter, which demonstrated consistent and sustained high levels of patient and physician satisfaction. The final manuscript has been written and we anticipate the publication will appear later this year. In the meantime, components of the data from this trial will be reported at various medical conferences, and will include discussions of blinded MRI assessment of breast defects, procedural safety, oncological safety observed to date, and cost-benefit analysis as compared to alternative approaches.

We expect that this longer-term data will support the adoption of the RESTORE procedure in Europe for partial mastectomy defect reconstruction. In parallel, we believe we are making progress toward securing payment at the government and hospital level. This is a very fragmented process within Europe, but it’s our belief that tangible progress in certain regions will start to become publically visible over the next few quarters.

Celution® One

The next-generation Celution® One System is now actively being used to treat patients in the ADVANCE trial. We expect to receive European approval (CE Mark) this year, which would carry the same indications-for-use assigned to our current Celution® 800 System. These indications include breast reconstruction, treatment of Crohn's fistulas, and aesthetic body contouring. Production of the Celution® One System, manufactured by the Olympus-Cytori, Joint Venture, was relatively unaffected by recent events in Japan, production is on-line and active, and our current inventory of the new systems is sufficient to support the ADVANCE trial requirements.

Sales and Marketing

To support growing worldwide sales, we now have approximately 40 sales and marketing professionals, more than half of which are in the field in Asia, Europe and the US. This includes regional country managers in key areas, distribution managers, direct sales personnel, clinical specialists and technical support. Our strategy is to scale wisely for growth at our current stage. Then, as key regulatory, reimbursement and trial data become available, we expect that our team can be scaled more aggressively and rapidly to drive substantial revenue growth. In addition, we have completed our search for an experienced medical product marketing executive, Clyde Shores, to lead our global marketing team and direct the launch of forthcoming key products such as Celution® One.

Regulatory

United States

While we believe we can build a successful organization by targeting international markets, we also recognize the immense value of the US healthcare market. Three parallel paths to the US market are underway. The first pathway is focused on achieving device claims and market access utilizing the 510(k) process. In this category, we believe there are predicate devices which make this an appropriate and viable approach and we are actively seeking multiple 510(k) clearances.

Second, we are pursuing a soft tissue defect repair indication, which we believe should come under the FDA's Humanitarian Device Exemption (HDE) process. Once a Humanitarian Use Device (HUD) determination is granted, the Company can apply for an IDE trial, typically including a small number of patients, to achieve specific HDE claims to market to patients with this orphan condition.

Third, we are currently planning for a 60 to 120 patient chronic myocardial ischemia safety and feasibility study. If commenced, this would be a follow-on trial to PRECISE and mark the beginning of our cardiac development in the US. Our expectation is that this will be a prospective, randomized, multi-center, double blind, and placebo-controlled trial. Based on current timelines, assuming we receive the necessary approvals, we expect to initiate enrollment in this trial in the first half of 2012.

Ahead of Celution® approval in the US, we have launched PureGraft™, for aesthetic body contouring. We believe that for smaller volume procedures, such as facial injections, this is a very good option for surgeons who want to quickly prepare autologous fat grafts.

An expansion of the PureGraft™ product line and the StemSource® Cell Bank is the StemSource® Tissue Bank, for which we received our first order this week. The tissue bank allows physician customers to use PureGraft™ as part of a system to freeze and preserve patient's fat tissue. This tissue can be utilized over time and on-demand for aesthetic dermal fill procedures. We believe the ability for doctors to offer, and for patients to receive, repeat injections of autologous fat will expand the options for dermal filling needs at a fraction of the cost of injectable products currently on the market. The StemSource® Tissue Bank is designed as a subset of the much more comprehensive StemSource® Cell Bank, and is intended to be sold into private practices exclusively for banking and subsequent future aesthetic dermal fill applications.

Japan

Cytori has applied for Celution® System approval in Japan as a device, consistent with all other regulatory determinations globally. We have recently provided an extensive amount of clinical data related to our Restore 2 trial to support the application. We believe that we are making clear progress toward an approval in Japan.

Additionally, we are pursuing approval for our PureGraft™ products in Japan. We currently believe that PureGraft™ is likely to be approved during calendar year 2011.

Europe

As described previously, much of our regulatory work in Europe is now centered on building on our current indications-for-use by leveraging clinical data from our trials and studies. The core focus today is our current application for no-option chronic myocardial ischemia patients. We intend to continue to build on our existing base of claims, strategically adding new indications as data become available to support claim expansion and access to targeted markets.

Radiation Injury & Acute Radiation Sickness

Since the current tragedy began unfolding in Japan, there has been increased visibility on novel approaches and products related to radiation preparedness. This is indicative of two points. First, radiation induced injuries and acute radiation sickness are very difficult, if not impossible to treat with current therapy. Second, these conditions are serious and often life threatening.

Investors who have been following Cytori's progress are likely well aware that Cytori's technology has been used to successfully treat patients with radiation injury. Many of these patients have been treated at the Nagasaki University Center of Excellence and Global Center for Radiation Health Risk Control and the Nagasaki Nuclear Bomb Institute, a World Health Organization center in Atomic Medicine. We believe our limited but highly successful clinical experience in treating radiation wounds positions us well to help with treating exposure wounds in patients related to the current Fukushima Daiichi Nuclear Power Plant situation. Furthermore, there is pre-clinical evidence and scientific rationale that Celution® output would be effective in improving survival in patients suffering from Acute Radiation Sickness.

These circumstances may be addressed by multiple treatment pathways, which we are currently pursuing. First and foremost is the possibility to treat patients with radiation wounds. Second is the ability to harvest and cryo-preserve cells of workers, neighbors, contractors, emergency personnel and more broadly to any at-risk population that may be exposed currently or in the future. With respect to the current situation in Japan, we are working with officials there to help in whatever way possible. Finally, this heightened awareness of exposure risks extends globally and we believe that the need for disaster preparedness, banking and stockpiling is relevant to all nations where nuclear power generation is present and active.

First Quarter Sales Performance

Quarterly revenue and gross margin variability is expected at this stage. First quarter 2011 revenues in particular were affected by the events in Japan. Notably, 72% of first quarter 2010 sales came from Japan and included a Stemsource® Cell Bank. By comparison, 30% of product sales in the first quarter of 2011 came from Japan with no corresponding bank sale. In contrast, both European and US revenues in the first quarter grew substantially year over year. For 2011, the Company's guidance for accelerate revenue growth remains unchanged.

Total revenues for the first quarter of 2011 were $2.6 million compared to $4.4 million in the first quarter of 2010, including $1.4 million and $2.3 million in product sales in 2011 and 2010, respectively. During the first quarter of 2011, Cytori recognized $1.2 million in development revenues related to the Olympus-Cytori Joint Venture associated with the achievement of commencing manufacturing for the Celution® One System, as compared to $2.1 million in the first Quarter 2010.

Cytori ended the first quarter of 2011 with 162 revenue generating units compared to 149 reported at year end 2010. The Company shipped 241 consumables, including 131 reorders, during the first quarter of 2011. This compares to 342 consumables shipped, including 261 re-orders in the first quarter of 2010 and 437 consumables shipped, including 350 reorders in the fourth quarter of 2010. In addition, Cytori fulfilled orders for 843 PureGraft™ units in the first quarter.

2011 Outlook

Our key initiatives for the remainder of the year will be to achieve approval for no-option chronic myocardial ischemia patients in Europe, drive enrollment in the ADVANCE heart attack trial, execute our US regulatory and development strategy, and grow the commercial business. Select milestones we are targeting to achieve during the next 12 months include:

- Chronic myocardial ischemia indication-for-use in Europe
- Celution® One CE Mark approval
- PureGraft™ approval in Japan
- Accelerated revenue growth for the full year in 2011
- Report of 18-month outcome data from the APOLLO heart attack trial
- Publish and present complete RESTORE 2 data
- Celution® System 510(k) clearance
- Humanitarian Use Device designation
- Finalize US HDE soft tissue defect repair study design
- Design and prepare to begin a US chronic myocardial ischemia study (FDA, IDE trial)
- Growth in targeted emerging markets including India

We want to thank you again for your commitment and continued support of Cytori as we lead the market in bringing regenerative medicine products to patients around the world.

Warm Regards,

Christopher J. Calhoun
Chief Executive Officer

Cautionary Statement Regarding Forward-Looking Statements

This shareholder letter includes forward-looking statements regarding events, trends and business prospects, which may affect our future operating results and financial position. Such statements, including, but not limited to, those regarding our ability to increase sales opportunities due to our expansion of Celution® System indications in Europe, our ability to achieve revenue growth in 2011, our ability to successfully expand commercialization of the PureGraft™ product, our ability to obtain third party and governmental approvals for future clinical trials and reimbursement for our products, our ability to execute on our US regulatory strategy, our ability to complete enrollment of the ADVANCE trial in the first half of 2013, our ability to complete development of a next-generation cosmetic surgery clinic device, our ability to achieve chronic myocardial ischemia indication-for-use in Europe as well as the other enumerated milestones we identify that we are targeting to achieve in 2011, and our efforts to leverage out technology in the radiation injury and acute radiation sickness markets, are all subject to risks and uncertainties that could cause our actual results and financial position to differ materially. Some of these risks and uncertainties include, but are not limited to, risks related to our history of operating losses, the need for further financing and our ability to access the necessary additional capital for our business, inherent risk and uncertainty in the protection intellectual property rights, regulatory uncertainties regarding the collection and results of clinical data, uncertainties relating to the success of our sales and marketing programs, changing and unpredictable regulatory environment, dependence on third party performance and, the risk of natural disasters and other occurrences that may disrupt the normal business cycles in areas of our global operations, as well as other risks and uncertainties described under the "Risk Factors" in Cytori's Securities and Exchange Commission Filings on Forms 10-K and 10-Q. We assume no responsibility to update or revise any forward-looking statements to reflect events, trends or circumstances after the date they are made.

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