



INITIATION | COMMENT

MARCH 17, 2011

Endocyte, Inc. (NASDAQ: ECYT)**Novel Targeted Phase III Program In Platinum Resistant Ovarian Cancer****Outperform
Speculative Risk**

Price:	7.94	Price Target:	14.00
Shares O/S (MM):	29.7	Implied All-In Return:	76%
Dividend:	0.00	Market Cap (MM):	236
		Yield:	NM

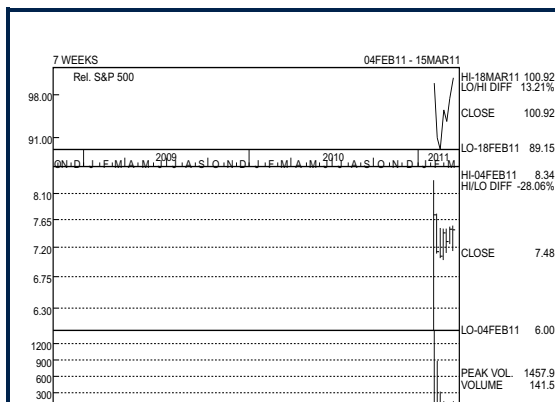
Event

We are initiating coverage of ECYT with an Outperform rating, Speculative Risk, and \$14 price target.

Investment Opinion

Endocyte is developing a novel targeted cancer drug with a diagnostic to pre-select patients. Our positive view is based on its 100% ownership of EC145 and technology, its impressive randomized Phase II data in ovarian cancer, and funding to run the Phase III trial. The companion imaging agent lowers risk by identifying patients likely to respond, improving the risk/benefit, potentially supporting more favorable reimbursement, and likely expanding the market to other indications such as lung cancer.

- **New twist and a proven theme.** The successful development of antibody-drug conjugates such as SGN-35 (Seattle Genetics) and T-DM1 (Roche/ImmunoGen) provides strong rationale for drugs that contain a targeting agent and a toxic payload. Endocyte's technology is a new spin with a potent drug attached to a targeted small molecule.
- **Robust Phase II results.** EC145 in combination with Doxil increased median PFS by 85% from 11.7 weeks to 21.7 weeks and decreased the risk of progression by 37% vs. Doxil alone (HR 0.626, p=0.031). EC145 treatment was very well tolerated and associated with only modest increases in Grade 3/4 toxicities.
- **Patient selection.** The target of EC145 (folate receptor, FR) is overexpressed in approximately 80% of ovarian cancer patients. EC20 is a diagnostic imaging agent used to identify tumors that highly express FR and therefore have increased sensitivity to EC145. EC20 will be used to prescreen patients for the Phase III trial.
- **Phase III to start in Q2:11.** The Phase III trial is designed to replicate the positive Phase II with some improvements in design including 1) more patients (500 vs. 150), 2) double-blind and independent review of scans, and 3) exclusion of patients that are EC20 negative, enriching the population with patients most likely to respond. PFS is the co-primary endpoint in both the overall population and in the highest folate receptor patients.
- **Attractive valuation.** ECYT's current market capitalization of \$220M and enterprise value of \$135M put it at the low end of public cancer comps. Our price target is \$14/share based on 1) sum of the parts, 2) P/E multiple, and 3) a company level DCF. The potential for limited newsflow in 2011/2012 is a risk.

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FY Dec	2010A	2011E	2012E	
Rpt EPS - Basic	(21.77)	(1.30)	(0.89)	
P/Rpt EPS	NM	NM	NM	
Rpt EPS - Basic	Q1	Q2	Q3	Q4
2010	(6.37)A	(5.79)A	(6.10)A	(3.57)A
2011	(0.40)E	(0.28)E	(0.32)E	(0.33)E

All values in USD unless otherwise noted.

Portfolio Manager's Summary

Endocyte has completed a statistically significant positive Phase II trial for its lead drug EC145 in platinum resistant ovarian cancer (PROC). EC145 is a targeted agent with a companion diagnostic, which will be used in the Phase III to select patients most likely to benefit from the drug. Endocyte plans to initiate a Phase III trial in Q2:11 and we believe the program has a lower risk because of 1) the positive Phase II data and 2) patient selection in Phase III. We recommend investors own ECT shares now, primarily because of the low relative valuation compared to other Phase III companies, and the expectation that value will increase as the company gets nearer to clinical data in 2013. Near-term upside could come from updated Phase II data presentations, an ex-U.S. partner, and visibility on a potentially shorter regulatory path in Europe.

Key Selling Points

- **Positive Phase II data.** Endocyte reported a statistically significant and clinically meaningful increase in PFS with the addition of EC145 to Doxil in patients with PROC. This was the primary endpoint of the trial, and the analysis included all patients.
- **Ability to select patients.** Endocyte has a companion diagnostic that can select patients with the highest level of folate receptor expression (the target of EC145). The Phase II data clearly shows better efficacy in patients with higher expression.
- **Enriched population in Phase III.** Endocyte will only enroll patients in the Phase III trial that overexpress folate receptor.
- **Lower clinical and regulatory risk.** The ability to select patients will likely increase the magnitude of clinical benefit and improve the risk/benefit by excluding patients unlikely to benefit, which also increases the probability of FDA approval.
- **Potential broader use in multiple indications, including NSCLC.** The folate receptor is over-expressed in a number of solid tumors, including NSCLC, breast, and other cancers. A Phase II trial in heavily pre-treated NSCLC patients showed promising results.
- **100% ownership.** Endocyte owns all rights to EC145, the companion diagnostic called EC20, and its technology. Endocyte may opt to partner ex-U.S. rights to EC145, or may ultimately be the target of acquisition.

Risk Factors

- **FDA often wants survival.** Success on PFS endpoints is not a guarantee for approval. FDA often wants to see an improvement in overall survival, which is not the primary endpoint in the Phase II or Phase III trials.
- **Competition.** Several companies, including Roche, Eisai, Amgen, Nektar, and others are developing drugs for ovarian cancer. Some of these have shown activity in platinum resistant ovarian cancer.
- **Diagnostic regulatory risk.** Linking approval to use of a diagnostic requires that both the drug and the diagnostic are approved. EC20 is an imaging agent injected in patients, so the regulatory risk is higher than for a laboratory diagnostic.
- **Timing.** Final data from the Phase III trial is not expected until 2013. The potential for limited newsflow in 2011/2012 is a risk.
- **Phase II design.** The Phase II trial was open label, which introduces some risk of investigator bias. The fact that the efficacy in the Phase II correlates well with the expression of the target, however, provides evidence that the efficacy seen in that trial can not be explained away by investigator bias.

Exhibit 1: Summary News Flow and Valuation

Timing	Expected News Flow	Program
Mar. 2011	Meeting with Scientific Advisory Working Party (EMA) re. EC145	EC145
Apr. 2011	Additional FDA discussion with diagnostic group regarding EC20	EC20
Q2:11	Initiate Phase III PROCEED trial in platinum resistant ovarian cancer	EC145 / EC20
Jun. 2011	Present final PFS data from PRECEDENT at ASCO	EC145 / EC20
2011/12	Potential partner for EC145	EC145
2011/12	Initiate Phase II trial in NSCLC (likely depends on partnership)	EC145
Q1:12	Final Phase II overall survival data from PRECEDENT	EC145 / EC20
Q4:12	Interim Phase III PFS results in ovarian cancer	EC145
H1:13	Final Phase III PFS results from PROCEED; interim OS results	EC145

Valuation Method	Per Share
Sum of the parts	\$14.34
P/E multiple based	\$14.37
Company DCF	\$14.43
Average	\$14.38

Source: Company reports and RBC Capital Markets estimates.

Recently Completed IPO

Endocyte priced its initial public offering on February 4 at \$6/share and closed the deal on February 9 with the exercise of the full over allotment. In total, Endocyte sold 14.375 million shares for gross proceeds of \$86.25 million (\$78.8 million net). Just prior to the IPO, Endocyte raised \$11.8 million from the sale of convertible notes, which automatically converted into 2.336 million shares at a fixed discount to the IPO price. Following these transactions, Endocyte reports having 29.662 million shares outstanding.

Endocyte ended 2010 with \$16.9 million in cash and following its IPO and second tranche of its convertible note offering had pro forma cash of \$99.4 million. On its year-end conference call, Endocyte provided guidance that it would end 2011 with approximately \$60 million in cash, enough to fund its Phase III program in ovarian cancer.

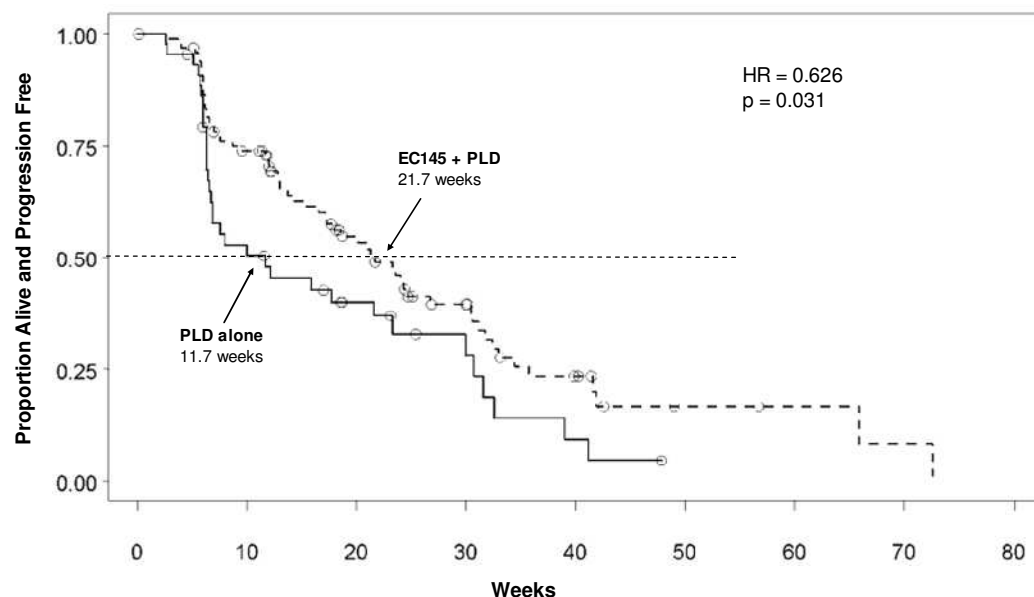
PRECEDENT - Positive Phase II Data

In the 149-patient Phase II PRECEDENT trial EC145 met its primary efficacy endpoint of progression free survival (PFS), and all the important secondary endpoints were directionally similar including overall survival (OS), overall response rate (ORR), and disease control rate (DCR).

- **Primary analysis.** Endocyte has completed the primary PFS analysis for the PRECEDENT trial, and the benefit is clear. Median PFS increased by 85% or 10 weeks from 11.7 weeks for the control group to 21.7 weeks for the EC145 group. The hazard ratio of 0.626 corresponds to a 37% reduction in the risk of progression. These results were statistically significant with a p value of 0.031. Earlier releases of the data demonstrated even more robust results (HR of 0.497 reported at ASCO 2010). The modest change in results does not alter the conclusion that the drug is highly active, nor does it substantially change the powering assumptions for Phase III (see Exhibit 3).
- **Overall survival trend.** A benefit in overall survival has not been conclusively demonstrated, but there is a positive trend in favor of EC145 (HR 0.878, p value 0.680), see Exhibit 4.
- **Ability to identify best responders.** Using its EC20 imaging agent, Endocyte can identify patients most likely to respond to treatment. Patients designated as EC20(-) had no benefit, and patients with the highest expression EC20(++) had a much bigger benefit. Among EC20(++) patients the PFS hazard ratio was 0.381 (p 0.018), and the median PFS increased from 6.6 weeks to 24.0 weeks (see Exhibits 5 and 6).
- **Trend in response rate.** Radiologic response rate increased modestly to 18% from 12% and disease control rate increased to 73% from 53%. CA-125 response rates were more robust with an ORR of 24% vs. 11%. The small increase in response rate is in-line with the single digit response rate seen previously in a monotherapy trial.

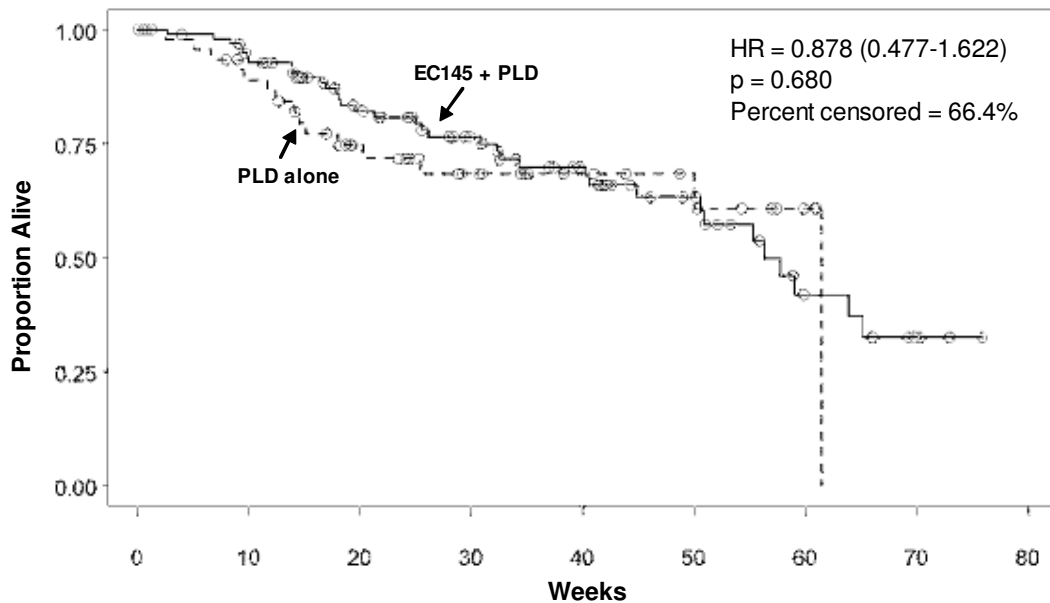
More complete clinical results beyond the key data are presented in the section “Additional Detail from PRECEDENT” starting on page 13.

Exhibit 2: PRECEDENT Trial - Robust Phase II Result



Source: Company reports.

Exhibit 3: PRECEDENT Trial - Overall Survival Trend



Source: Company reports.

Patient Selection is a Key Differentiator for EC145

The ability to identify patients prior to initiating therapy that will either not respond or respond very well to a treatment significantly lowers clinical, regulatory, and commercial risk.

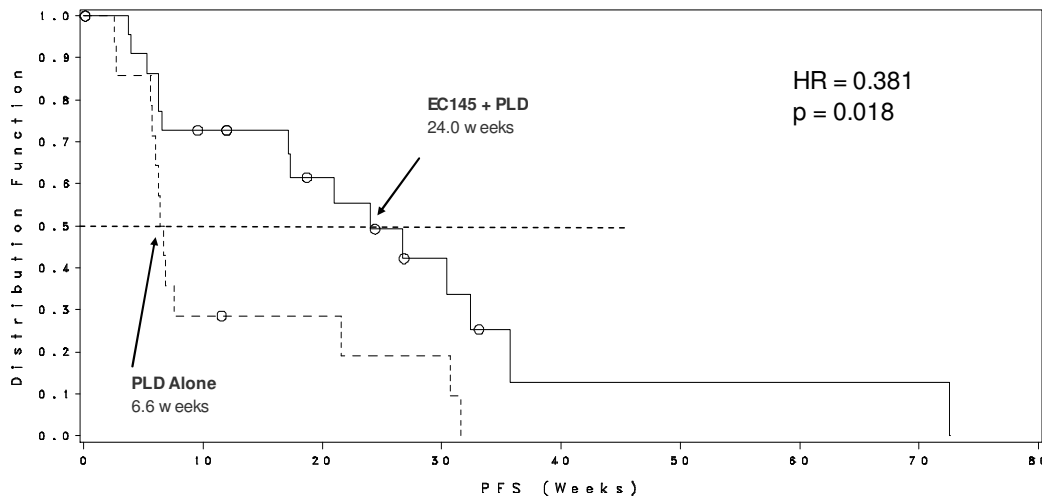
- **Clinical risk reduction.** By selecting those patients that are most likely to respond, Endocyte increases the statistical power of its Phase III trial and reduces the risk that the wrong patients will be enrolled. The risk for Endocyte is further reduced by using patient selection to define two co-primary analyses in the Phase III – one in the EC20 (+ or ++) population and one in the EC20(++) patients only. Success in either subgroup would be considered a win.
- **Regulatory risk reduction.** When analyzing clinical data, FDA is very concerned about risk/benefit. The ability to screen out patients that are unlikely to benefit from the drug improves the risk/benefit. An enriched population will also likely produce a more robust result in terms of magnitude of benefit and statistical significance, which both help secure approval.
- **Reimbursement risk reduction.** Payers will be more willing to pay for drugs when a test is available to select patients likely to respond. The cost of treating a patient that does not benefit and may have side effects is high.
- **Competitive risk reduction.** Defining a subset of patients that is ideal for your drug, provides a scientific rationale for becoming standard of care in that population. Drugs used more broadly across the entire population may be at a competitive disadvantage within the selected population.

EC20 Status in PRECEDENT

The EC20 imaging agent was used to determine the folate receptor status in patients but was not an enrollment criteria. Approximately 20% of patients tested in PRECEDENT were EC20(-), 40% were EC20(+), and 40% were EC20(++). As expected, the clinical results were best in the patients with the highest level of folate receptor expression, the EC20(++) population (Exhibit 5 and 6).

Among patients that tested EC20(++), the hazard ratio for the PFS endpoint was an impressive 0.381 (p 0.018), indicating a 62% reduction in the risk of progression. The median PFS was also impressive, increasing from 6.6 weeks to 24.0 weeks. Importantly, the hazard ratio correlated with EC20 status, with the best result in the EC20(++) patients, followed by the pooled EC20(+), then the EC20(+), and finally the EC20(-) showed the worst outcome.

Exhibit 4: PRECEDENT Trial - Greater Benefit in EC20(++) Patients



Source: Company reports.

Exhibit 5: PRECEDENT Trial - HR Correlates With EC20 Status

EC20 subset	Hazard ratio	p value	Comments
++	0.381	0.018	Co-primary subset in Phase III
+ / ++	0.547	NR	Co-primary subset in Phase III
- / + / ++	0.626	0.031	Primary analysis in Phase II
+	0.87	NR	
-	1.8	0.5	Excluded from Phase III
Approximate breakdown			
++	40%		
+	40%		
-	20%		

Source: Company reports.

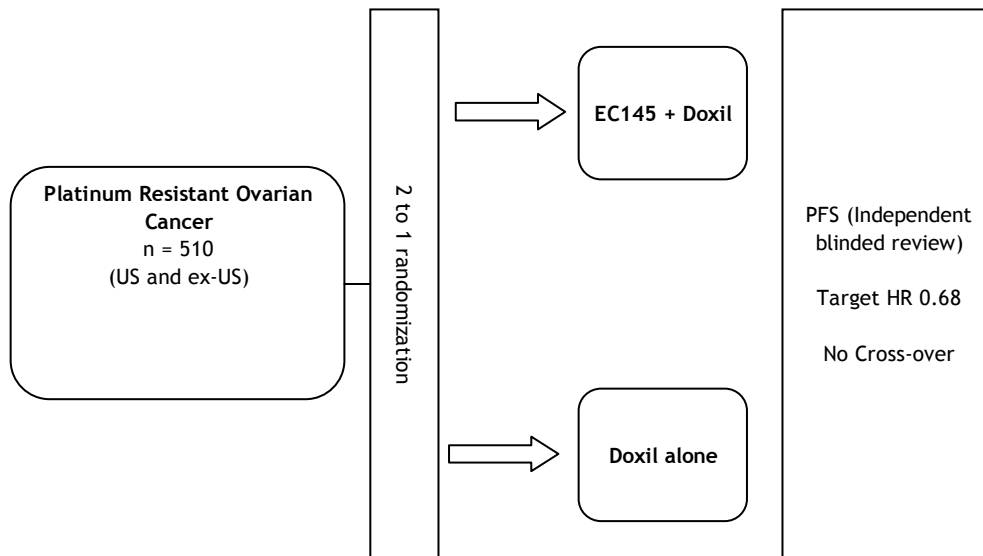
PROCEED - Phase III

The pivotal Phase III trial for EC145 – called PROCEED – essentially replicates the design of the successful Phase II trial PRECEDENT, with a few enhancements to increase the statistical power and provide data suitable for regulatory approval (Exhibit 8).

- **More patients.** PROCEED is planned to enroll 512 platinum resistant ovarian cancer patients (vs. 149 in PRECEDENT). The larger size increases the statistical power of the trial and makes it possible to have two co-primary endpoints and the potential to show a statistically significant survival advantage (a secondary endpoint).
- **Double blind.** Neither the patient nor the caregiver will know what treatment the patient is receiving, and importantly the radiologist reading the scans and determining progression will also be blinded. These design features are essential for regulatory approval in the U.S. because they minimize the potential for bias.
- **Progression is defined by radiology alone.** In the PRECEDENT trial, tumor progression was based either on radiologic progression (by standardized criteria) or on clinical progression as assessed by the physician (i.e., significant worsening of symptoms). The latter has a greater potential for investigator bias, and will not be included in PROCEED. In PRECEDENT, clinical progression accounted for less than 10% of all the progressions, and removing these from the analysis did not impact the result negatively.
- **Excluding EC20(-) patients.** Unlike PRECEDENT, the PROCEED trial will pre-screen patients using the EC20 imaging agent, and will enroll only patients who are positive (i.e., EC20(+) or EC20(++)). In the PRECEDENT trial, this patient population had a greater PFS benefit than the overall population with a HR of 0.55.

- **Co-primary endpoints.** In PROCEED there are two primary endpoints both measuring PFS. The first is PFS in the overall intent-to-treat population, which will include patients that are EC20(+) and EC20(++). This population differs from the PRECEDENT population because EC20(-) patients are not included in PROCEED. The second primary endpoint in PROCEED is PFS in the sub-group of patients with EC20(++). The statistical implication of the two co-primary endpoints is that the p value, which is normally 0.05 or less, will be split between the two endpoints. For PROCEED to be successful, the intent-to-treat population needs to have a p value of ≤ 0.04 and/or the EC20(++ sub-group needs a p value of ≤ 0.01 .
- **Statistical power.** The PROCEED trial is designed to detect a hazard ratio of 0.7 in the primary intent-to-treat analysis, and detect a HR of 0.56 in the EC20(++ sub-population. For the intent-to-treat analysis in PROCEED, the HR in the similar population in PRECEDENT was 0.547, and for the EC20(++ population the HR in PRECEDNT was 0.381. As a result, we believe the statistical powering assumptions are conservative.

Exhibit 6: PROCEED Trial Design



Source: Company reports.

Exhibit 7: PRECEDENT vs. PROCEED Trial

	PRECEDENT	PROCEED
No. of Patients	149	512
Clinical Sites	65	120 to 150
Patient Population	PROC	same
Blinding	Open-label	Double-blinded
Treatment Arm	EC145 and PLD (2:1)	same
Control Arm	PLD	PLD and Placebo
Primary Endpoint	PFS (radiologic and clinical)	PFS (radiologic only)
Powered for OS	No	Yes
EC145 Dose	2.5 mg intravenous, 3 times per week in weeks 1 and 3, on a 28 day cycle	same
PLD Dose	50 mg/m ² intravenous on day 1, on a 28 day cycle	same
EC20(++) and EC20(+) Hazard Ratio	0.547 (actual)	0.7
EC20(++) Hazard Ratio	0.381 (actual)	0.56
Cross-Over	Not allowed	same
EC20 Scan	Enrolled regardless of scan results	EC20(-) excluded

Source: Company reports.

Regulatory Strategy

United States - Approval Based on PFS from PROCEED and PRECEDENT

Endocyte plans to submit the PFS results from both PROCEED and PRECEDENT as the basis for FDA review and approval. The FDA has not formally agreed (no SPA) that a PFS benefit is sufficient for approval and we expect that approval will be based on a review of the clinical data. This is not out of the ordinary. Approval based on PFS depends on the magnitude of the treatment effect, the side effect profile, and whether there is any trend or better yet positive survival benefit. Approvals based on PFS also require that the endpoint is measured very rigorously by independent and blinded radiologists, as is planned for PROCEED.

Although there is risk in seeking approval based on PFS, we believe there are several factors that mitigate that risk, and that PFS is still the primary endpoint in nearly all Phase III cancer trials across the industry.

- **Patient identification.** The ability to pre-screen patients for EC20 status is an important risk lowering feature of the trial. It eliminates those patients that are likely to be harmed by the drug (toxicity with no benefit), and enriches the population in those with the best chance to benefit. Patient selection improves the risk/benefit ratio, which is key for approval.
- **Co-primary endpoint.** The predefined and stratified subset of EC20(++) patient should show a very large magnitude of benefit. The large expected treatment effect in a more highly selected group of patients should provide a clear path to approval even if the results for the intent-to-treat population are less impressive.
- **Unmet medical need.** Platinum resistant ovarian cancer is a significant unmet medical need population. Clear demonstration of a PFS advantage over a standard of care treatment, repeated in two separate studies should meet the FDA's requirement for approval.
- **Survival trend.** Approval based on PFS typically requires that the sponsor show that survival is not worse with treatment. Ideally, a drug should show both a PFS benefit and a survival benefit, though this is not always possible based on trial size and subsequent treatments

The risks include:

- Lack of an SPA;
- PFS as an endpoint, rather than the gold standard survival; and
- The need to get the EC20 diagnostic approved along with the drug.

Europe - Potential for a rapid path to approval

The PROCEED trial will form the basis for the primary regulatory strategy in Europe. However, Endocyte is in discussions with European regulators regarding a potential accelerated approval based on the PRECEDENT results. Endocyte already has had preliminary discussions indicating that this may be possible, and more formal discussions are planned for Q2. For PRECEDENT to satisfy regulators, however, it will likely require that the scans be independently reviewed to confirm progression.

In our model, we assume that the full PROCEED data is required for European approval and consider the ongoing discussions with European regulators as a bit of a long shot. We would be positively surprised if Endocyte were able to file based on PRECEDENT.

Market Model - Ovarian Cancer With Upside in Other Indications

Platinum resistant ovarian cancer is the initial target market for EC145. It was chosen based on its abundant expression of folate receptor (~80% positive) and its high unmet medical need.

Our base model assumes the following:

- **2014 launch** – Assumes Phase III data in early 2013 and NDA filing later in 2013
- **Monthly price of \$7,500** (increasing 3%/year) – This equals \$90,000 per year, which is at the low end of new targeted therapies
- **Average treatment duration of six months** – Implies a per patient cost of around \$45,000, which is low for a new targeted agent

In our model, we forecast \$200 million in U.S. sales in 2018, assuming 30% penetration in the addressable incidence population. To get to the population size we assume approximately 30,800 new ovarian cancer patients per year of which 12,600 are estimated to be folate receptor positive and platinum resistant (~40%).

In Europe, the model is similar with a 2014 launch, discounted price to the U.S., and slightly lower penetration. We assume an ex-U.S. partner markets in Europe and pays a 20% royalty. Our 2018 EU sales estimate is \$118 million.

Exhibit 8: Sales Model for EC145 in Ovarian Cancer

Summary - US EC145 Build (\$ in MM)	2013E	2014E	2015E	2016E	2017E	2018E
Ovarian Cancer Patients on EC145	0	540	1,348	2,336	3,037	3,790
% Penetration	0.0%	5.0%	12.0%	20.0%	25.0%	30.0%
Treatment Duration (months)	6.0	6.1	6.1	6.2	6.2	6.3
Revenue per Month	\$0	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441
US Revenue - Ovarian Cancer (\$ MM)	0.0	24.5	63.5	114.3	154.3	200.0
Summary - EU EC145 Build (\$ in MM)	2013E	2014E	2015E	2016E	2017E	2018E
Ovarian Cancer Patients on EC145	0	350	873	1,514	2,362	3,275
% Penetration	0.0%	2.5%	6.0%	10.0%	15.0%	20.0%
Treatment Duration (months)	6.0	6.1	6.1	6.2	6.2	6.3
Revenue per Month	\$0	\$5,750	\$5,750	\$5,750	\$5,750	\$5,750
EU Revenue - Ovarian Cancer (\$ MM)	0.0	12.2	30.6	53.5	84.2	117.7
Royalty on ex-US sales (\$MM)	0.0	2.4	6.1	10.7	16.8	23.5

Source: Company reports and RBC Capital Markets estimates.

Financial Overview and Model Assumptions

EC145 Ovarian Cancer Revenue and Royalties. We assume U.S. and EU launches for EC145 for the treatment of platinum resistant ovarian cancer in 2014. We forecast U.S. sales of \$25 million in 2014, which grow to \$200 million in 2018. We forecast EU EC145 sales of \$12 million and royalties of \$2 million in 2014, which grow to \$118 million and \$24 million, respectively, in 2018.

Additional Product Revenue. We forecast sales of EC145 in non-small cell lung cancer totaling \$20 million in 2017 and \$70 million in 2018.

Expenses. We forecast R&D expenses of \$25 million in 2011 which increases to \$65 million in 2018. We forecast SG&A expense of \$8 million in 2011, which ramps up sharply in 2013 and 2014 ahead of and during the U.S. EC145 launch and continues to increase thereafter. We forecast COGS totaling 10% of product sales.

Taxes. As of year end 2009, ECYT's net operating loss carry forwards totaled approximately \$74 million. We expect this total to continue to increase as the company will accrue losses until 2016, according to our estimates. We model an increasing tax rate during the initial years of profitability.

Common Stock Issuance and Other Sources of Capital. ECYT completed its initial public offering in February 2011 and we forecast a cash balance of \$97 million at the end of Q1:11. Currently, we model non-dilutive capital from an ex-U.S. partnership in Q1:12 and an opportunistic secondary offering in Q3:12.

Earnings per Share. We forecast sustained profitability starting in 2016 with an EPS of \$0.92 (\$0.60 fully taxed).

Valuation and Capital Structure

Following its \$86 million initial public offering in February 2011, Endocyte has sufficient cash to fund its Phase III program through to data in H1:13. With its net IPO proceeds and estimated \$18 million year-end cash, Endocyte has approximately \$97 million in cash, \$15M in debt, and 29 million shares outstanding at the end of Q1:11. Its preferred shares all converted at the IPO, and Endocyte has approximately 2M options outstanding.

The fully diluted market capitalization is \$239 million and its enterprise value is \$155M. This valuation places ECYT at the low end of its Phase II/III cancer comps. Given the positive randomized Phase II data, we believe ECYT shares should trade closer to the median valuation of \$334 million, with upside from a potential partnership and ultimately from positive Phase III data.

Exhibit 9: Cancer Comp Table

Company	Ticker	Product	Stage	Last Price	Market Cap. (MM)	Enterprise Value (MM)
Seattle Genetics	SGEN	SGN-35	Phase III	\$14.78	1,501.8	1,206.6
Exelixis	EXEL	XL 184	Phase III	\$11.15	1,218.6	1,177.0
ARIAD Pharmaceuticals	ARIA	Ridaforolimus	Phase III	\$5.78	640.6	548.8
ImmunoGen	IMGN	T-DM1	Phase II/III	\$8.48	576.9	447.3
Medivation	MDVN	MDV3100	Phase III	\$16.17	559.0	347.5
AVEO Pharmaceuticals	AVEO	Tivozanib	Phase III	\$14.65	521.6	404.8
Micromet	MITI	Blinatumomab	Phase II pivotal	\$5.08	513.4	291.5
Sunesis Pharmaceuticals	SNSS	Voreloxin	Phase III	\$1.88	498.8	458.0
Oncolytics Biotech	ONCY	Reolysin	Phase III	\$5.86	360.8	340.9
Pharmacyclis	PCYC	PCI-24781	Phase II	\$5.11	306.2	244.6
Arqule	ARQL	ARQ 197	Phase II	\$6.23	279.7	242.9
Ziopharm Oncology	ZIOP	Darinaparsin	Phase II	\$5.69	276.3	215.9
Keryx Biopharmaceuticals	KERX	KRX-041	Phase III	\$4.32	264.3	235.8
Endocyte	ECYT	EC145	Phase III ready	\$7.48	220.3	130.6
Curis	CRIS	GDC-0449	Phase II pivotal	\$2.88	218.3	177.7
Synta Pharmaceuticals	SNTA	STA-9090	Phase II	\$4.66	188.9	150.1
Array BioPharma	ARRY	ARRY-543	Phase II	\$2.98	167.0	184.2
OncoGeneX	OGXI	OGX-011	Phase III	\$15.52	100.6	16.3
Average					467.4	378.9
Median					333.5	268.0

Source: FactSet, ThompsonONE, and RBC Capital markets estimates.

Priced as of market close, March 15, 2011.

\$14 Price Target Based on Multiple Methodologies

We arrive at our \$14 price target using 1) a sum-of-the-parts analysis, 2) a P/E multiple, and 3) a company level DCF.

DCF Sum-of-the-Parts Analysis

Our sum-of-the parts DCF analysis of \$14.34/share includes EC145 for platinum resistant ovarian cancer and non-small cell lung cancer, the DCF of Endocyte's net loss carry forwards and its net cash.

- **EC145 (\$14.43/share).** We value the ovarian cancer program at \$8.60/share and the non-small cell lung cancer program at \$5.83/share. We assume peak sales of \$300 million in PROC and \$500 million in NSCLC, apply a 4x sales multiple, and discount at 15% for 8 and 10 periods, respectively. We apply a 65% probability of success to PROC and a 35% probability of success to the NSCLC program, given that it is earlier with limited data available.

- **Financial assets (-\$0.09/share).** The non-operating portions of our sum-of-the-parts DCF valuation includes \$2.85/share in net cash (\$3.35/share in cash less \$0.51/share in debt), negative \$4.11/share in next 5-year's burn, and \$1.17/share in the present value of the tax benefit of Endocyte's expected NOLs.

Exhibit 10: Sum of the Parts Valuation

Program	Stage	Ownership	Peak Sales	Sales Multiple	Discount Rate	Discount Period	Value	Prob.	Prob. Adjusted Value	Adjusted Per Share
EC145 - PROC	Ph 3	100%	300	4.0	15%	8	392	65%	255	\$8.60
EC145 - NSCLC	Ph 2	100%	500	4.0	15%	10	494	35%	173	\$5.83
Value									\$428	\$14.43

Financials	Per Share	
Cash (post IPO)	99.4	\$3.35
Debt (post IPO)	(15.0)	(\$0.51)
Next 5 year's burn	(121.8)	(\$4.11)
Discounted value of NOLs	34.6	\$1.17
Total NPV Sum	(2.8)	(\$0.09)

Summary	Per Share
EC145 - PROC	\$8.60
Pipeline (incl. EC145)	\$5.83
Net cash plus NOLs	\$4.01
5-year burn	(\$4.11)
Total	\$14.34

Assumption: Valuation Year	2011
Share Count (fully diluted)	29.7

Source: RBC Capital markets estimates.

P/E Multiple Valuation

We use a P/E multiple of 18x our 2018 fully taxed GAAP EPS estimate of \$2.12 and a discount rate of 15% for seven years to arrive at our price target of \$14.37. This P/E multiple is slightly ahead of the industry average of 14x for 2011, which we believe is justified given that Endocyte will be launching an important new drug addressing an unmet need and is forecast to grow EPS at very high normalized rate (88% CAGR for 2015-2018 when first achieving profitability). We use a discount rate of 15%, which we believe is appropriate given the highly positive Phase II results and a more enriched Phase III study.

Exhibit 11: P/E Multiple Based Valuation Sensitivity (price per share)

		PE Multiple						
		12.0	14.0	16.0	18.0	20.0	22.0	24.0
Discount Rate	9.0%	13.94	16.27	18.59	20.92	23.24	25.57	27.89
	11.0%	12.28	14.32	16.37	18.42	20.46	22.51	24.56
	13.0%	10.84	12.64	14.45	16.25	18.06	19.86	21.67
	15.0%	9.58	11.18	12.78	14.37	15.97	17.57	19.17
	17.0%	8.49	9.91	11.32	12.74	14.16	15.57	16.99
	19.0%	7.54	8.80	10.06	11.32	12.57	13.83	15.09
	21.0%	6.71	7.83	8.95	10.07	11.19	12.31	13.43

Source: RBC Capital Markets estimates.

DCF Analysis - Based on Company P&L

A DCF analysis supports a \$14.43 price target with the following assumptions: a discount rate of 15% (somewhat higher than the calculated weighted average cost of capital of 12%), -25% terminal growth rate, and a 20% medium-term top-line growth forecast, which declines to 5% by 2026. We chose 2026 as our terminal value year because it is the year the patents expire and we assigned a -25% terminal growth rate to imply generic competition.. Aside from EC145 for NSCLC, we do not include any other products in our estimates. Our DCF also accounts for net operating loss carryforwards and current net cash.

Exhibit 12: DCF Analysis

	2010A	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	
Revenue	0.0	0.0	14.3	15.0	56.5	78.8	143.4	202.0	293.5	352.2	405.0	457.7	508.0	558.8	614.7	645.5	677.7	
Assumption: Growth (Mid-Term)				5%	277%	39%	82%	41%	45%	20%	15%	13%	11%	10%	10%	5%	5%	
EBIT (Excludes Stock based Compensation)	(19.8)	(27.6)	(21.6)	(32.4)	(8.4)	(9.0)	48.5	93.1	160.1	181.8	209.1	236.3	262.2	288.5	317.3	333.2	349.8	
Assumption: Operating Margin					-30%	-22%	28%	42%	52%	52%	52%	52%	52%	52%	52%	52%	52%	
Assumption: Tax rate	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	
Income (Loss)	(19.8)	(27.6)	(21.6)	(32.4)	(8.4)	(9.0)	32.0	61.5	105.6	120.0	138.0	155.9	173.1	190.4	209.4	219.9	230.9	
Cash Flow Calculation:	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Terminal
Total adjustments	(0.4)	0.0	30.0	(11.2)	5.4	(9.2)	(8.3)	(10.8)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow	(20.2)	(27.6)	8.4	(43.7)	(2.9)	(18.1)	23.7	50.6	105.7	120.0	138.0	155.9	173.1	190.4	209.4	219.9	230.9	433.0
Assumption: Terminal Growth	-25.0%																	
Assumption: Discount Rate	15.0%																	
Assumption: WACC	12.1%																	
Assumption: Valuation Year	2011	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15
NPV		(27.6)	7.3	(33.0)	(1.9)	(10.4)	11.8	21.9	39.7	39.2	39.2	38.5	37.2	35.6	34.0	31.1	28.4	53.2
NOL value		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
NOLs	94.0	121.6	143.2	175.6	184.0	193.0	161.0	99.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Positive earnings	no	no	no	no	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Paying tax	no	no	no	no	no	no	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Tax add-back	0.0	0.0	0.0	0.0	0.0	0.0	16.5	31.7	33.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NPV	0.0	0.0	0.0	0.0	0.0	0.0	8.2	13.7	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total																		
NPV Sum			\$344.3															
Current net cash			\$84.4															
NOL value			\$34.6															
Diluted shares (YE-2011)			32.1															
Price / Share			\$14.43															

Source: RBC Capital Markets estimates.

Price Target Impediments

Our price target is dependent primarily on the regulatory and commercial success of EC145 in platinum resistant ovarian cancer as well as in non-small cell lung cancer. Any setbacks in clinical development, delay in launch, increased competition or other limitations to the market potential of EC145 could negatively impact our valuation. Upside could come from pricing, better than anticipated market penetration, new partnerships, clinical success of earlier-stage programs that are not included in our valuation and/or setbacks for potential competitors.

Ovarian Cancer Treatment and the Competitive Landscape

The ovarian cancer market includes first-line, relapsed platinum-sensitive, and platinum resistant. Typically, ovarian cancer patients will be treated upfront with combination chemotherapy consisting of carboplatin and Taxol or another carboplatin containing regimen. Increasingly, Avastin may be added to first-line chemotherapy. Patients that initially respond but relapse more than six months later may still be considered “platinum sensitive” and may respond to subsequent rounds of platinum containing chemotherapy. Patients are considered platinum resistant if they either do not respond to carboplatin or relapse in less than six months. This population may get treated with a variety of single agent chemotherapies including Doxil, Hycamptin, Gemcitabine, Taxotere, Taxol, and others or with Avastin.

There are a number of drugs in development for ovarian cancer, but many of them are targeting either first-line or platinum sensitive ovarian cancer, and are therefore not in direct competition for patient enrollment or ultimately in the market place. It is possible that if EC145 is successful in platinum resistant ovarian cancer, Endocyte may seek to expand its use into earlier lines of treatment, but currently we model the drug only for platinum resistant ovarian cancer.

Approved Agents with Potential Expansion into Ovarian Cancer

Avastin – Roche along with the Gynaecologic Oncology Group (GOG) have the largest ongoing effort in ovarian cancer, testing Avastin across all lines of therapy. As has been seen in other solid tumor indications, such as breast, colon, and lung, we would expect the best results to be in combination with chemotherapy in the front-line setting. Roche has presented positive Phase III data in first-line from the ICO7 trial, and has filed for regulatory approval in the EU in 2010 with a U.S. filing planned for 2011. Despite positive data in the front line setting, ovarian cancer treatment guidelines do not recommend the routine use of Avastin, but this will likely change with longer patient follow up and/or an FDA approval. Roche also recently announced that its OCEANS study in recurrent platinum-sensitive ovarian cancer met its primary endpoint, and we expect the full results will be presented at ASCO in June 2011. Roche is also conducting the AURELIA trial. This 300-patient Phase III trial in platinum resistant ovarian cancer patients test Avastin added to a combination chemotherapy regimen.

Folate Receptor Targeted Agents

MORAb-103 – Eisai and Morphotek have developed an antibody targeting the folate receptor (same target as EC145) called farletuzumab (MORAb-003). Eisai has initiated a 900-patient Phase III trial of carboplatin/Taxol +/- MORAb-003 in patients with platinum sensitive relapsed ovarian cancer. It is believed to work primarily through ADCC (similar to Rituxan) and it has shown positive efficacy in combination with chemotherapy.



ImmunoGen – Using its antibody-drug conjugation (ADC) technology, ImmunoGen has developed an ADC targeting the folate receptor which it calls IMGN853. This drug is in preclinical development and has demonstrated potent anti-tumor activity in animal models. We expect ImmunoGen could file an IND later in 2011 or 2012. We would expect a folate receptor targeted ADC to be active in ovarian cancer.

Novel Targets

AMG 386 – Amgen is planning two Phase III trials for AMG 386, its ANG 1&2 inhibitor, in combination with either Taxol or Doxil in ovarian cancer patients that are either partially platinum sensitive or resistant. The ongoing 900-patient TRINOVA-1 trial tests Taxol +/- AMG 386 with PFS as the primary endpoint. The TRINOVA-2 trial will randomize 380 patients to Doxil with or without AMG 386 also with PFS as the primary endpoint.

Multi-Target Kinase Inhibitors

Recentin (cediranib) – AstraZeneca's multi-kinase inhibitor (targets VEGFR-1, -2, -3) has so far failed in Phase III development for metastatic colorectal cancer and glioblastoma. It is currently in a company-sponsored Phase II trial for non-small cell lung cancer and the UK based Medical Research Council is conducting a large Phase III trial of Recentin in ovarian cancer (ICON6), testing carboplatin/Taxol with or without Recentin in patients with relapsed platinum sensitive ovarian cancer. This trial started in 2007 and is still enrolling.

Saracatinib (AZD0530) – AstraZeneca is testing its src inhibitor in a Phase II/III trial in platinum resistant ovarian cancer. This trial is only 100 patients and tests the six month PFS of Taxol or Taxol plus saracatinib. Presumably, AstraZeneca may expand this trial if the initial Phase II data is positive.

Vargatef (BIBF 1120) – Boehringer Ingelheim's multi-kinase inhibitor (targets VEGFR, FGFR, and PDGFR) is in Phase III development for non-small cell lung cancer, liver cancer, and ovarian cancer. The Phase III ovarian cancer trial is a randomized first-line trial testing carboplatin/Taxol with or without vargatef. The primary endpoint is PFS.

Votrient (Pazopanib) – GlaxoSmithKline's multi-kinase inhibitor (targets VEGFR-1,2,3, PDGFR, and c-kit) is FDA approved for the treatment of patients with advanced kidney cancer. GlaxoSmithKline is hoping to expand its use into ovarian cancer in the first-line maintenance setting and is running a 900-patient trial of Votrient vs. placebo in patients that have responded to first-line platinum containing chemotherapy. The primary endpoint of the trial is PFS.

Chemotherapy

NKTR-102 – Nektar has developed a prodrug of the widely used chemotherapy agent irinotecan. NKTR has shown single agent activity in breast and ovarian cancer. The data in platinum resistant ovarian cancer includes a 71 patient open-label Phase II trial testing two dosing schedules (every two weeks or every three weeks). The overall response rate was 21%, which compares favorably to other chemotherapy agents. A Phase III plan is not finalized, but it would seem that the company will likely compare the drug head to head against other common chemotherapy agents for platinum resistant ovarian cancer, such as Doxil. Nektar also reports what it considers very favorable survival and PFS data from the trial, but it is impossible to interpret in our view, based on the size of the trial and the lack of a control group.

Exhibit 13: Multiple Large Phase III Trials in Ovarian Cancer

First-line						
Company	Roche	Roche	Roche	Roche	Boehringer Ingelheim	GlaxoSmithKline
Drug	Avastin bevacizumab	Avastin bevacizumab	Avastin bevacizumab	Avastin bevacizumab	BIBF 1120 Vargatef	Votrient pazopanib
No. of pts.	1528	1873	625	332	1300	900
Start	Apr-06	Sep-05	Oct-10	Jan-10	Nov-09	May-09
Primary endpoint	PFS	PFS	PFS	OS	PFS	PFS
Treatment	Carbo/Taxol +/- Avastin (7.5 mg/kg q3w)	Carbo/Taxol +/- Avastin (15 mg/kg q3w)	Carbo/Taxol +/- Avastin	Carbo/Taxol or Oxaliplatin/Cepecitabine +/- Avastin	Carbo/Taxol +/- BIBF 1120	Pazopanib vs. placebo
Line of treatment	First-line	First-line	First-line	First-line	First-line	First-line maintenance
Target	VEGF	VEGF	VEGF	VEGF	VEGFR/FGFR/PDGFR	VEGFR-1,2,3, PDGFR, c-kit
Other	ICON7 Positive data presented at ESMO 2010	GOG-0218	GOG-0262	GOG-0241		

Platinum-sensitive						
Company	Roche	Roche	Morphotek/Eisai	Amgen	Amgen	AstraZeneca
Drug	Avastin bevacizumab	Avastin bevacizumab	MORAb-003 farletuzumab	AMG 386	AMG 386	Recentin Cediranib
No. of pts.	484	660	900	900	380	2000
Start	Apr-07	Dec-07	Mar-09	Oct-10	Mar-11	Nov-07
Primary endpoint	PFS	OS	PFS	PFS	PFS	PFS
Treatment	Carboplatin/gemcitabine +/- Avastin (15mg/kg q3w)	Carbo/Taxol +/- Avastin	Carbo/Taxol +/- MORAb-003	Taxol +/- AMG 386	Doxil +/- AMG 386	Carbo/Taxol +/- Recentin
Line of treatment	Recurrent Platinum-sensitive	Recurrent Platinum-sensitive	First relapse Platinum sensitive	Recurrent Partial platinum sensitive or resistant	Recurrent Partial platinum sensitive or resistant	Relapsed Platinum sensitive
Target	VEGF	VEGF	Folate receptor alpha	ANG 1 & 2	ANG 1 & 2	VEGFR-1, -2, -3
Other	OCEANS Primary endpoint met. Data likely at ASCO 2011	GOG-0213	SPA	TRINOVA-1	TRINOVA-2 not yet recruiting	ICON6

Platinum-resistant			
Company	Roche	BioNumerik	AstraZeneca
Drug	Avastin bevacizumab	Karenitecin BNP 1350	AZD0530 Saracatinib
No. of pts.	300	500	102
Start	Oct-09	Aug-07	Oct-10
Primary endpoint	PFS	PFS	6 month PFS
Treatment	Taxol/topotecan/Doxil +/- Avastin	Karenitecin vs. Topotecan	Taxol +/- Saracatinib
Line of treatment	Relapsed Platinum resistant	Relapsed Platinum resistant	Relapsed Platinum resistant
Target	VEGF	Camptothecin class of chemotherapy	Src
Other	AURELIA		Phase II/III

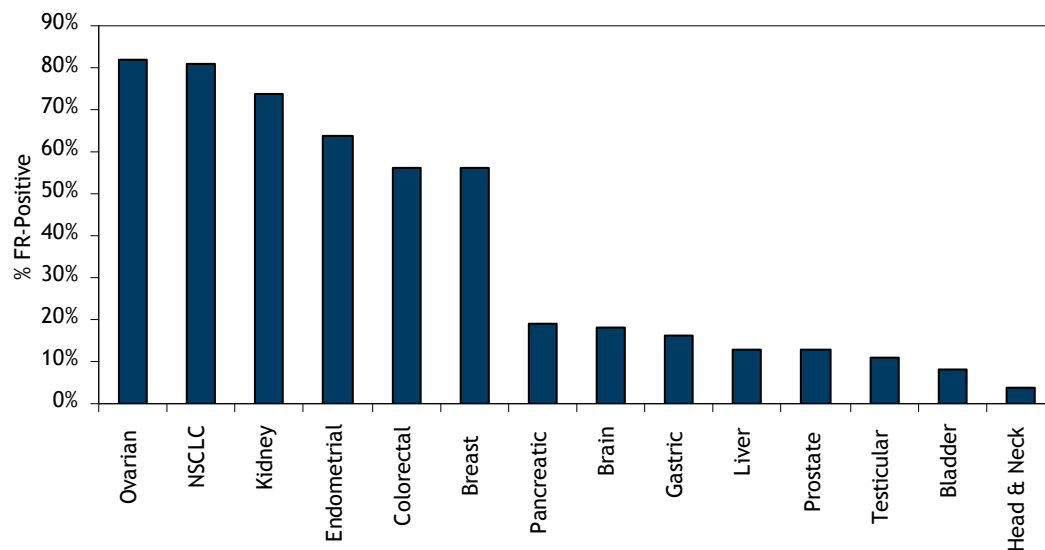
Source: Company reports.

Expression of the Target

Folate receptor is expressed across a wide range of tumor types. Its expression is most uniform in ovarian cancer and lung cancer. Other tumors, such as kidney, breast, and colorectal have expression in more the 50% of patients. In these tumor types, the use of a the companion diagnostic will be essential to enrich the treated population with likely responders.

Folate receptor is also expressed in the kidneys, placenta, choroid plexus, lung, and thymus. Any toxicities in these organ systems must be considered on target. The lack of kidney toxicity to date, is likely due to the unique function of the folate receptor in this organ. Folate receptor is used to scavenge folate from the urine and return it to the blood. During this process Endocyte's folate conjugates are not degraded and therefore are not toxic.

Exhibit 14: Multiple Blockbuster Market Opportunities for a Folate-Targeted Therapy



Source: Company reports and RBC Capital Markets.

Additional Detail from PRECEDENT

Well Designed and Balanced Trial

The PRECEDENT trial enrolled 149 patients in the U.S. (72%), Canada (9%), and Poland (19%). Overall, the trial was very well balanced for most of the important baseline characteristics. There were some imbalances, but importantly, these imbalances tended to favor the control group. For example a larger percentage of people in the EC145 group had liver and/or lung metastases (38% vs. 22%), and tumors tended to be larger in the EC145 group (93mm vs. 56mm).

Exhibit 15: PRECEDENT Trial - Well Balanced

	EC145/Doxil	Doxil
# of pts	100	49
Type of cancer		
Ovarian	90.0%	93.9%
Primary peritoneal	8.0%	6.1%
Fallopian tube	2.0%	0.0%
Age	60.4	62.6
Country		
US	72.0%	71.4%
Canada	8.0%	12.2%
Poland	20.0%	16.3%
Tumor SumLD (mm)	93.0	56.0
CA-125 (<200U/mL)	59.0%	65.3%
Prior regimens		
1	55.0%	53.1%
2	43.0%	44.9%
3	2.0%	2.0%
ECOG status		
0-1	96.0%	98.0%
2	4.0%	2.0%
Liver/lung metastases	38.0%	22.4%
Months from last platinum dose	4.7	5.2
Months from diagnosis	12.6	12.6

Source: Company reports.

Favorable Safety Profile for EC145

Overall, the safety profile of EC145 in the Phase II trial was very favorable. The addition of EC145 to Doxil increased the rate of grade 3 or 4 neutropenia (12% vs. 4%) and leukopenia (17% vs. 4%). However, some of this increase may be attributable to the larger cumulative dose of Doxil in the EC145 arm, which is expected given the longer PFS. There was also an increase in hand-foot syndrome also called PPE (11% vs. 2%).

Exhibit 16: PRECEDENT Trial - Well Tolerated

	EC145/Doxil	Doxil
# of pts	107	50
Doxil exposure (median)	275 mg	170 mg
Grade 3/4 adverse events		
Hematologic		
Neutropenia	12.1%	4.0%
Febrile neutropenia	0.9%	2.0%
Anemia	6.5%	4.0%
Thrombocytopenia	1.9%	2.0%
Leukopenia	16.8%	4.0%
Lymphopenia	17.8%	18.0%
Non-hematologic		
Stomatitis	5.6%	4.0%
PPE syndrome	11.2%	2.0%

Source: Company reports.

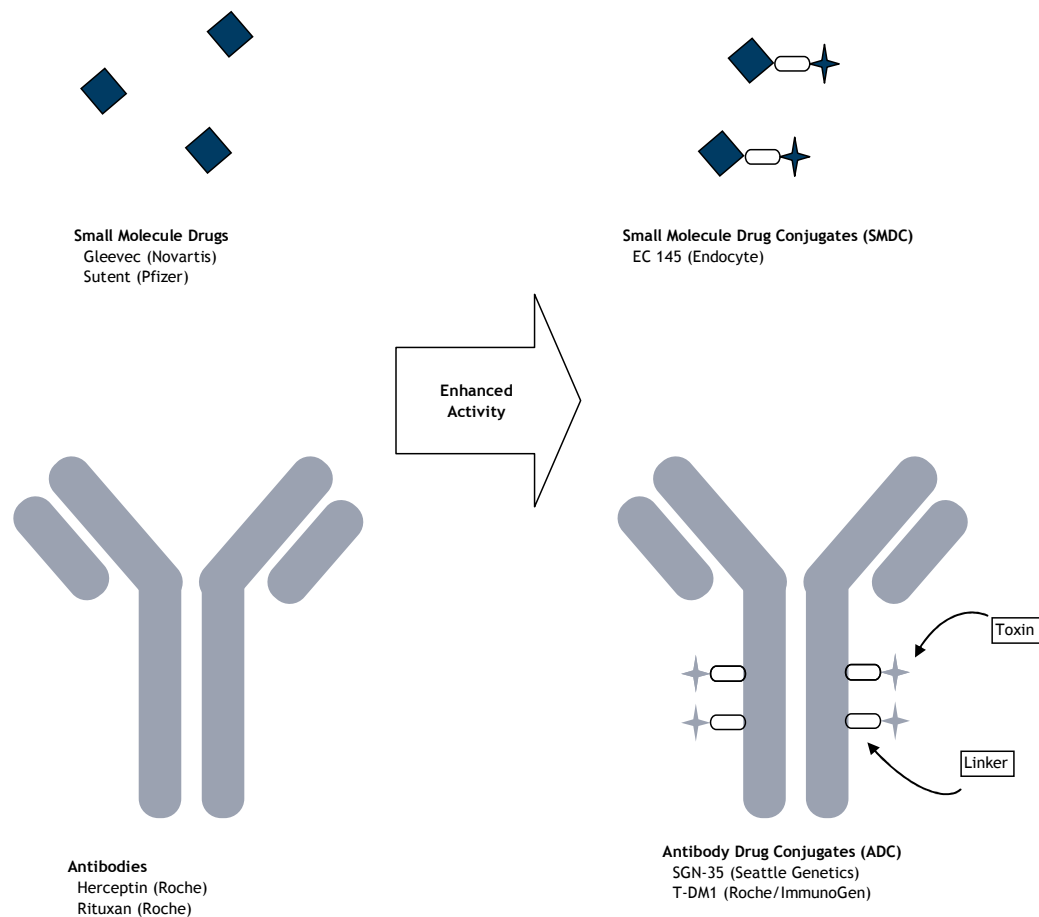
Small Molecule Drug Conjugates

With the recent clinical successes of SGN-35 (Seattle Genetics) and T-DM1 (Roche/ImmunoGen), investors and physicians have increased enthusiasm for antibody drug conjugation technology. Endocyte's small molecule drug conjugates share many of the favorable characteristics of antibody drug conjugates.

EC145 is comprised of a targeting agent, a linker, and an active cell-killing agent. Each of the three components is essential for the activity and safety of the drug.

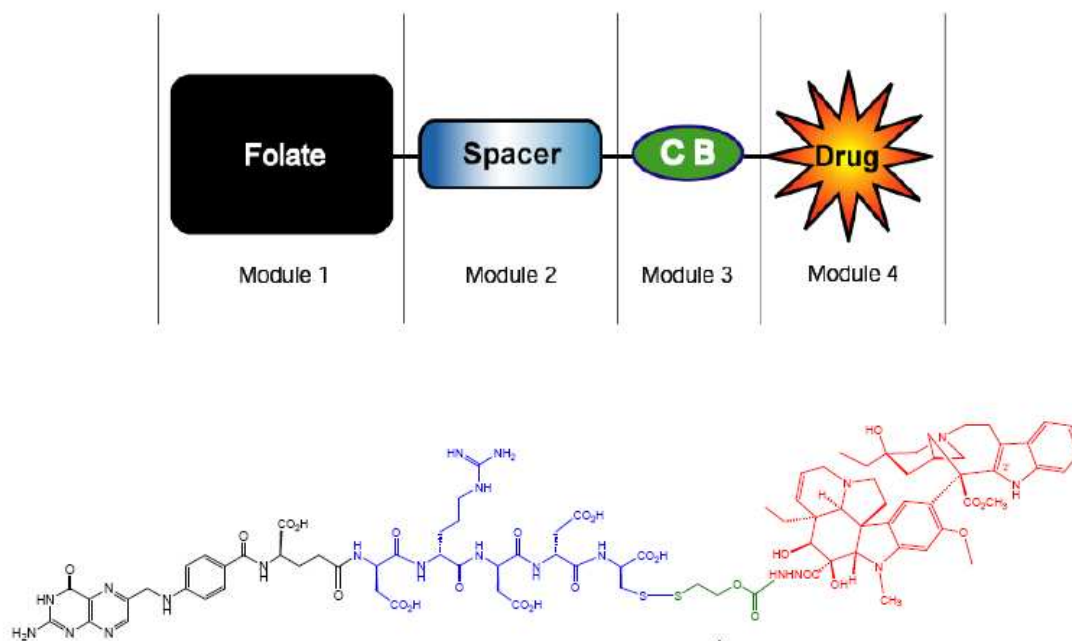
- **Targeting agent** – Folate is a nutrient that is needed by dividing cells. Two receptor based systems exist to transport folate into cells – folate receptors and folate reverse transporters. The latter is ubiquitous and not appropriate for targeting drug delivery, but the folate receptor is preferentially expressed on tumor cells and can be used to actively transport folate-containing conjugates into cells.
- **The linker** is a chemical connector that attaches the drug to the targeting agent. The linkers are composed of a spacer which can be modified with multiple characteristics and a cleavable portion that permits the controlled release of the drug. Linkers need to be stable in serum and release their payload inside of cells. Besides stability and targeted release, linkers can also confer other properties, such as solubility, steric hindrance, etc. In the case of EC145, the linker is designed with a disulfide bond that breaks in the reducing environment within certain compartments in cells. The linker/drug combination also prevents uptake of EC145 by the ubiquitous reverse folate transporter.
- **DAVLBH** is a potent cell killing agent that is too toxic to administer directly to patients without appropriate targeting. It works by disrupting microtubules and belongs to the same drug class as vinblastine.

Exhibit 17: Small Molecules Can Target Toxins Similar to Antibodies



Source: RBC Capital Markets.

Exhibit 18: Modular Technology to Deliver a Potent Payload



Source: Company reports.

Modular Technology

In addition to its lead drug, EC145, Endocyte is testing a variety of combinations of targeting agents, drugs, and linkers. Some of the variations that are under investigation include:

- **Multiple drug payloads.** EC0225 contains two cleavable linkers attached to two separate drugs – DAVLBH and mitomycin-C. EC0225 is in Phase I testing. It remains unclear whether there is an advantage of delivering two different toxic agents, though theoretically this could be useful in generating anti-tumor synergy or reducing the potential for drug resistance.
- **Spacer modification.** EC0489 contains three PEG chains attached to the spacer region. This modification alters the clearance and metabolism of the conjugate and may impact both safety and efficacy. EC0489 is in Phase I testing.
- **More potent drugs.** EC0305 targets the folate receptor but replaces DAVLBH with a more potent drug tubulysin. More potent drugs have the potential for increased efficacy. However, using more potent drugs has the potential liability of increased toxicity. EC0305 is in preclinical testing. Other drugs being investigated for potential conjugates include proteasome inhibitors, DNA crosslinkers, and microtubule agents. It is likely that certain tumors will have differential sensitivity to various drug types.
- **Less potent drugs.** Endocyte is testing two folate receptor targeted conjugates in preclinical studies for autoimmune and inflammatory indications. EC0746 contains methotrexate and EC0565 contains an mTOR inhibitor. These conjugates also employ a modified spacer similar to EC0489.
- **Novel targeting agents.** Endocyte conducting preclinical testing of conjugates that target the prostate antigen PSMA.

Exhibit 19: Pipeline of Conjugates

Product	Indication	Target	Payload	Status
Cancer				
EC145	Platinum resistant ovarian cancer	FR	DAVLBH	Phase II
	Non-small cell lung cancer		DAVLBH	Phase II
EC0489	Solid tumors	FR	DAVLBH	Phase I
EC0225	Solid tumors	FR	DAVLBH / Mitomycin-C	Phase I
EC17	Solid tumors	FR	Hapten	Phase I
EC0531	Solid tumors	FR	Tubulysin-B	Preclinical
EC1069	Prostate cancer	PSMA	Tubulysin-B	Preclinical
Inflammation				
EC0746	Inflammation	FR	Aminopterin	Preclinical
EC0565	Inflammation	FR	mTor inhibitor	Preclinical
Companion Imaging Diagnostics				
EC20	Diagnostic (folate receptor)	FR	Tc-99m	Phase II
EC0652	Diagnostic (prostate)	PSMA	Tc-99m	Preclinical

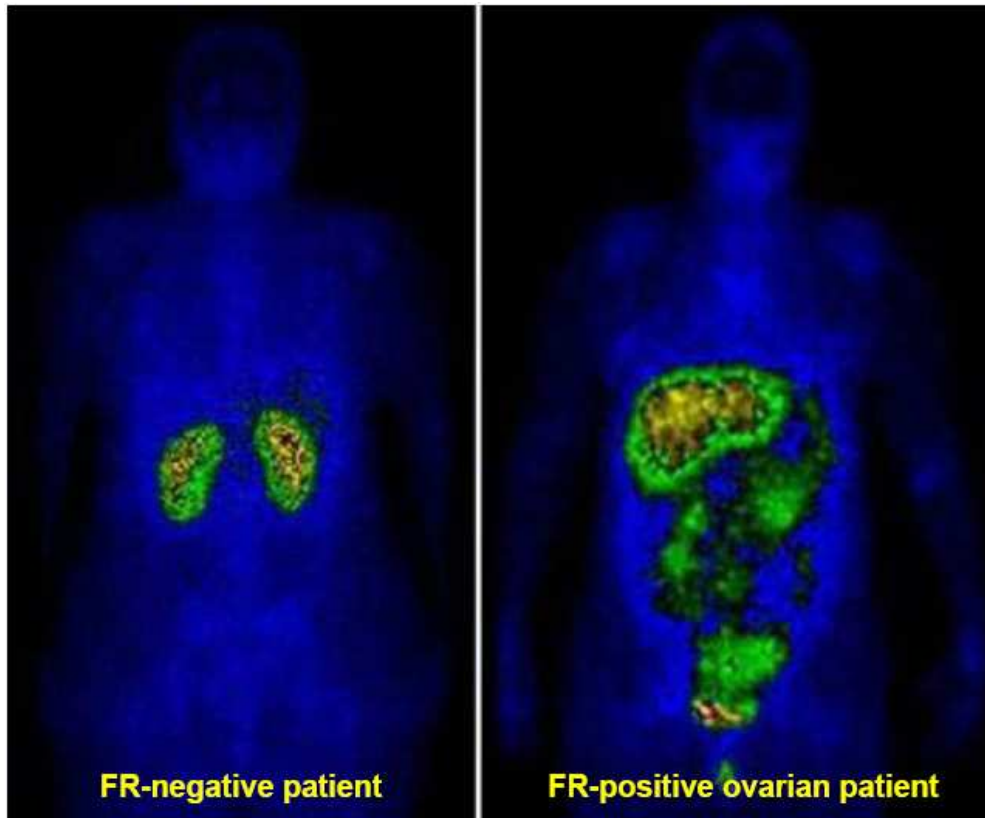
Source: Company reports.

Companion Diagnostic (EC20)

Identifying the appropriate patient for new targeted therapies can be identified by a number of techniques including 1) immunohistochemical analysis of tumor samples used to identify Her2+ tumors for Herceptin treatment, 2) genetic analysis used to determine EGFR and KRAS mutation status for use of Erbitux and Tarceva, and 3) imaging which is the plan for EC145 in a number of tumor types.

EC20 is a radiolabeled folate conjugate. It is structurally the same as EC145 except that the drug payload on EC145 is replaced by a detectable radiolabel made with technetium 99 (Tc99m). EC20 binds the same target on tumor cells as EC145 and provides a method for detecting the tumor and confirming the presence of the target.

Exhibit 20: EC20 Identifies Patients with Folate Receptor Positive Tumors



Source: Company reports.

Select Management Team

Ron Ellis, CEO, President, and Co-Founder. Mr. Ellis is a co-founder and has been CEO and President since January 1996. Previously, he held a variety of senior management positions at Hill-Rom Company, the \$1.2B healthcare division of Hillenbrand industries.

Mike Sherman, CFO. Prior to joining Endocyte, Mr. Sherman was Vice President of Finance and Strategic Planning for Guidant, where he held several senior management positions. He also held positions in business development, treasury and internal auditing at Eli Lilly.

Phillip Low, Ph.D., CSO. Dr. Low is a founder of Endocyte and is the Ralph C. Corley Distinguished Professor of Chemistry at Purdue University. He has spent over 18 years in drug delivery research, published over 250 scientific articles, served on the NIH Study Sections, and received a NIH MERIT award.

Christopher Leamon, Ph.D. VP of Research. Dr. Leamon conceptualized folate-targeted technology as a novel therapeutic approach for cancer. He has spent 18 years in drug delivery research. Previously, he conducted drug delivery research at GlaxoWellcome and Isis Pharmaceuticals.

Valuation

We arrive at \$14 price target using three methodologies:

1. **DCF Sum-of-the-Parts Analysis – Primary Valuation Metric.** Our sum-of-the parts DCF analysis of \$14.34/share includes EC145 for PROC (\$8.60/share) and NSCLC (\$5.83/share), the DCF of its net loss carry forwards (\$1.17/share), next 5-year burn (-\$4.11/share) and its net cash (\$2.85/share). We assume that EC145's patent life extends through 2026.
2. **P/E Multiple.** We use a P/E multiple of 18x our 2018 fully taxed GAAP EPS estimate of \$2.14 and a discount rate of 15% for 7 years to arrive at our price target of \$14.37.
3. **DCF Analysis – Based on Company P&L.** Our company level DCF analysis supports a \$14.43 price target with the following assumptions: a discount rate of 15%, -25% terminal growth rate, and a conservative declining 20-5% medium-term top-line growth forecast. Aside from EC145 for PROC and NSCLC we do not include any major pipeline products in our estimates.

Price Target Impediment

Our price target is dependent primarily on the regulatory and commercial success of EC145 in platinum resistant ovarian cancer as well as in non-small cell lung cancer. Any setbacks in clinical development, delay in launch, increased competition or other limitations to the market potential of EC145 could negatively impact our valuation. Upside could come from pricing, better than anticipated market penetration, new partnerships, clinical success of earlier-stage programs that are not included in our valuation and/or setbacks for potential competitors. We are initiating coverage with an Outperform rating, Speculative Risk and a \$14 price target.

Company Description

Endocyte is a biopharmaceutical company developing targeted therapies for the treatment of cancer and other serious diseases. The company uses its proprietary technology to create novel small molecule drug conjugates (SMDCs) and companion imaging diagnostics. SMDCs actively target receptors that are over-expressed on diseased cells, relative to healthy cells, which enables the treatment of patients with highly active drugs at greater doses, delivered more frequently, and over longer periods of time than would be possible with the untargeted drug alone. The combination of an SMDC with its companion imaging diagnostic is designed to personalize the treatment of patients by delivering effective therapy, selectively to diseased cells, in patients most likely to benefit. The company's lead SMDC, EC145, targets the folate receptor, which is frequently over-expressed in some of the most prevalent, and difficult to treat solid tumor indications, including ovarian, non-small cell lung, breast, colorectal, kidney, endometrial and other cancers.

Endocyte

Annual and Quarterly Income Statement

Jason Kantor, Ph.D. (415) 633-8565

Michael J. Yee (415) 633-8522

(\$ in MM; except per share)	Q1:10A	Q2:10A	Q3:10A	Q4:10A	2010A	Q1:11E	Q2:11E	Q3:11E	Q4:11E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
EC145																	
U.S. Sales - PROC											0.0	0.0	24.5	63.5	114.3	154.3	200.0
EU Royalty - PROC											0.0	0.0	2.4	6.1	10.7	16.8	23.5
EC145 - NSCLC											0.0	0.0	0.0	0.0	0.0	20.0	70.0
Total Product Revenues											0.0	0.0	26.9	69.6	125.0	191.2	293.5
Collaboration revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	15.0	29.6	9.2	18.3	10.8	0.0
Total Revenues	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	15.0	56.5	78.8	143.4	202.0	293.5
COGS						0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.4	11.4	17.4	27.0
Research and Development Expenses	3.9	3.7	3.7	3.3	14.6	4.5	6.0	7.0	7.3	24.8	33.8	40.0	46.0	55.0	55.0	60.0	65.0
Sales, General and Administrative Expenses	1.5	1.5	1.7	1.3	6.0	1.8	1.9	2.0	2.0	7.6	8.6	15.0	25.0	35.0	37.0	40.0	50.0
Total Costs and Expenses	5.4	5.2	5.4	4.6	20.6	6.3	7.9	9.0	9.3	32.4	42.4	55.0	73.5	96.4	103.4	117.4	142.0
Operating Income (Loss)	(5.4)	(5.2)	(5.4)	(4.6)	(20.6)	(6.3)	(7.9)	(9.0)	(9.3)	(32.4)	(28.2)	(40.0)	(16.9)	(17.5)	39.9	84.6	151.5
Other Income/(Expense), Net	(0.2)	(0.2)	(0.3)	1.3	0.5	(0.6)	(0.6)	(0.5)	(0.5)	(2.2)	(0.8)	(0.1)	0.3	0.3	0.3	0.3	0.3
Income (Loss) before Tax	(5.6)	(5.4)	(5.7)	(3.4)	(20.1)	(6.8)	(8.4)	(9.5)	(9.8)	(34.6)	(29.0)	(40.1)	(16.6)	(17.2)	40.2	84.9	151.8
Provision for Income Tax						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7.6
Net Income (Loss) - GAAP	(5.6)	(5.4)	(5.7)	(3.4)	(20.1)	(6.8)	(8.4)	(9.5)	(9.8)	(34.6)	(29.0)	(40.1)	(16.6)	(17.2)	40.2	82.7	144.2
EPS, Basic (GAAP)	(\$6.37)	(\$5.79)	(\$6.10)	(\$3.57)	(\$21.77)	(\$0.40)	(\$0.28)	(\$0.32)	(\$0.33)	(\$1.30)	(\$0.89)	(\$1.13)	(\$0.41)	(\$0.42)	\$0.96	\$1.96	\$3.39
EPS, Diluted (GAAP)	(\$0.39)	(\$0.36)	(\$0.38)	(\$0.22)	(\$6.41)	(\$0.36)	(\$0.26)	(\$0.30)	(\$0.31)	(\$1.20)	(\$0.83)	(\$1.06)	(\$0.39)	(\$0.40)	\$0.92	\$1.86	\$3.22
EPS, Diluted (Fully-Taxed, GAAP)															\$0.60	\$1.23	\$2.12
Shares Outstanding, Basic	0.9	0.9	0.9	0.9	0.9	16.9	29.7	29.8	29.9	26.6	32.6	35.6	40.9	41.3	41.7	42.2	42.6
Shares Outstanding, Diluted	14.5	15.0	15.1	15.1	3.1	19.1	32.0	32.0	32.1	28.8	34.8	37.8	43.1	43.5	44.0	44.4	44.8

EC145 summary												2013E	2014E	2015E	2016E	2017E	2018E
US sales												0.0	24.5	63.5	114.3	154.3	200.0
EU sales												0.0	12.2	30.6	53.5	84.2	117.7
Total sales												0.0	36.7	94.1	167.9	238.5	317.6
Revenue to Endocyte												0.0	26.9	69.6	125.0	171.2	223.5

Expense analysis												2013E	2014E	2015E	2016E	2017E	2018E
Cost of goods (% of sales)														10%	10%	10%	10%
R&D (% of revenues)														81%	70%	38%	22%
SG&A (% of revenues)														44%	44%	26%	17%
Operating Margin														-30%	-22%	28%	52%

Source: Company reports and RBC Capital Markets estimates

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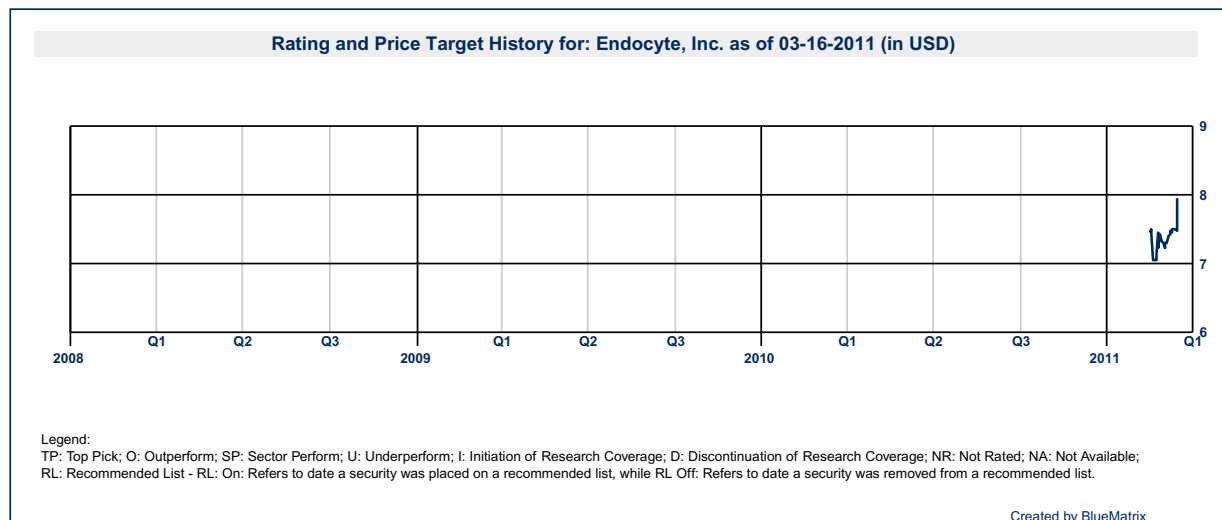
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