

Discovery: Medical Devices

Xcorporeal, Inc. | XCR - \$2.10 - AMEX | *Not Rated*

Initiation of Coverage

Stock Data	
Shares Out. (mil)	14.59
Mkt. Cap.(mil)	\$30.6
3-Mo. Avg. Vol.	36,119
12-Mo. Price Target	NA
Tot. Debt (mil)	\$0.00
Debt/Equity	NM
Est. 3Yr. EPS Growth	NM

EPS (\$)			
Yr Dec	2008	—2009E—	—2010E—
	Actual	Curr	Curr
1Q	(0.44)A	(0.29)E	(0.32)E
2Q	(0.37)E	(0.29)E	(0.28)E
3Q	(0.28)E	(0.29)E	(0.31)E
4Q	(0.28)E	(0.30)E	(0.28)E
YEAR	(1.37)E	(1.17)E	(1.19)E
P/E	NM	NM	NM

Revenue (\$ millions)			
Yr Dec	2008	—2009E—	—2010E—
	Actual	Curr	Curr
1Q	0.0E	0.0E	1.4E
2Q	0.0E	0.0E	2.1E
3Q	0.0E	0.0E	2.9E
4Q	0.0E	0.3E	3.8E
YEAR	0.0E	0.3E	10.1E

1 Year Price History/Ave. Daily Vol for XCR



2008

Created by BlueMatrix

Looking to "Clean Up" the Dialysis Space; Initiating Coverage

We are initiating coverage on the shares of XCR. Xcorporeal is an early-stage medical technology company developing a portable hemodialysis system, designed to improve significantly the manner in which ESRD (end-stage renal disease) patients are treated.

- With over half a million patients expected to receive chronic kidney therapy over the next several years and 5-year mortality rates standing in the 30% range, we believe Xcorporeal is targeting a large, unmet clinical need with a device design that should provide improved quality-of-life (QOL) and therefore better outcomes than those allowed by today's available products.
- Xcorporeal's PAK (Portable Artificial Kidney) system is being designed to be (1) lighter / smaller than today's at-home devices for improved portability and (2) avoid the need for high volumes of dialysate used in conjunction with therapy.
- Over the past couple of years, we believe that Xcorporeal's primary competitor, NxStage, has blazed the trail for at-home dialysis (both clinically and economically). If Xcorporeal is able to develop and obtain approval for the device it has designed, we believe the company will be positioned to capitalize on a trend toward more frequent at-home therapy.
- We expect catalysts for shares in the next few quarters to include regulatory approval for both the critical care and home therapy markets, as well as the establishment of strategic partnerships in the industry.
- Our valuation for XCR is based on two methods: (1) a discounted price to sales multiple sensitivity analysis that would peg the stock in the range of \$5 to \$7 today, and (2) a comparable trading and transaction review, which implies a \$10 potential value for XCR.

VIEWPOINT

We are initiating coverage on the shares of XCR.

Early-stage but worth the wait? Xcorporeal is an early-stage medical technology company developing a portable hemodialysis system, designed to improve significantly the manner in which ESRD (end-stage renal disease) patients are treated. With over half a million patients in need of chronic kidney therapy over the next several years and 5-year mortality rates standing in the 30% range, we believe Xcorporeal is targeting with a large clinical need with a device design that should provide improved quality-of-life (QOL) and therefore better outcomes than those allowed by today's available products.

Management team brings experience to upcoming developmental and regulatory hurdles. Xcorporeal has assembled an impressive management team for its size, bringing together several senior managers all with extensive experience in the medical device and pharmaceutical industries. With the company facing a number of regulatory and strategic hurdles over the next several quarters, we believe this level of collective experience will be critical in successfully achieving the company's goals.

Competition today should blaze the trail for an improved system. Today, at-home and critical care dialysis are two growing market segments, thanks to product launches over the past few years. NxStage Medical's device, called SystemOne, which was launched in the US in 2005, is now in over 350 dialysis centers and is being used to treat roughly 2500 patients at home (generating an annual sales run rate of roughly \$40 million). In the critical care setting, the company's device is being used in roughly 125 hospitals, which generates about a \$12 million annual revenue run rate in that segment. Over the past few years, we believe that NxStage has been able to gain traction by increasing patients' QOL with a more portable device, allowing at-home dialysis to be feasible (both clinically and economically).

Device highlights & upcoming catalysts. Xcorporeal's PAK (Portable Artificial Kidney) system is being designed to be (1) lighter / smaller than today's at-home devices for improved portability, (2) avoid the need for high volumes of dialysate to be used in conjunction with therapy, and (3) maintain high flow rates and efficacy levels, consistent with more traditional techniques. Between now and the end of 2009, we will look for:

- Completion of the PAK commercial prototype,
- 510(k) submission and approval for the critical care / hospital market,
- Initiation of an at-home hemodialysis clinical study,
- 510(k) submission and approval for the at-home market, and
- Potential strategic partnerships with larger dialysis players.

Valuation analysis based on long-term potential. Our valuation analysis for XCR is based on two methods, (1) a discounted price to sales multiple sensitivity analysis based on our FY12 revenue projection and (2) comparable trading and transaction valuations. Based on our current FY12 revenue projection of ~\$50 million and the potential market opportunity that could be served by Xcorporeal's technology, we believe a reasonable

valuation for XCR stands in the range of \$5 to \$7 today, which assumes a 20% discount rate and sales multiples ranging from 3.5x to 5.0x sales. This valuation assumes 19 million fully diluted shares, versus 14.4 million outstanding today. Longer-term, two direct comparables exist today, NxStage Medical, which garners a \$190 million trading market capitalization today, and Renal Solutions, which was recently acquired by Fresenius for \$190 million. These (absolute) valuation levels would imply a \$10 value for shares of XCR, again assuming 19 million fully diluted shares.

RISK SNAPSHOT

- Xcorporeal is an early-stage advanced technology company with a relatively short operating history, which creates uncertainty.
- The company has not finalized its commercial product, and we therefore believe Xcorporeal holds a level of product development risk today.
- The company's products could encounter regulatory setbacks and delays that would adversely affect the company's revenue and profitability timelines, and therefore its cash needs.
- The long-term success of its products will be dependent on third party payors providing appropriate levels of reimbursement or else revenues could be adversely affected.
- The company's portable kidney dialysis products will need to compete with several products currently on the market and could encounter competitive challenges that make it difficult to gain market share.
- Clinicians and patients are often reluctant to change, and Xcorporeal must overcome this inertia.
- The company's success will be dependent on its ability to continue to fund product development and future clinical studies of its devices.

COMPANY HISTORY & OVERVIEW

Headquartered in Los Angeles, California with R&D facilities in Irvine, Xcorporeal is an early-stage medical technology company developing dialysis products based on its proprietary blood filtration technology. Since it began implementing its current business model in 2006, Xcorporeal has focused on the design of portable devices for hemodialysis (a process by which blood is filtered in much the same way it is processed by the kidneys but with a hemodialyzer) to provide therapy to ESRD patients. The company is currently designing two devices for three applications: (1) a Portable Artificial Kidney (PAK) for attended use in a hospital or clinic, (2) a PAK for home hemodialysis and (3) a Wearable Artificial Kidney (WAK) for continuous ambulatory hemodialysis. The PAK device is being developed to hold certain competitive advantages over currently

available treatment techniques due to its smaller size and weight, ease-of-use characteristics (no drainage; reduced water requirement), and its ability to use a reduced quantity of dialysate while offering a full range of flow rates. We expect the first device could gain CE Mark status in 1H09, with FDA 510(k) clearance expected later in 2009 (for the critical care market). The WAK could be approved in the EU in 2010, and a PMA study could permit US approval in 2012.

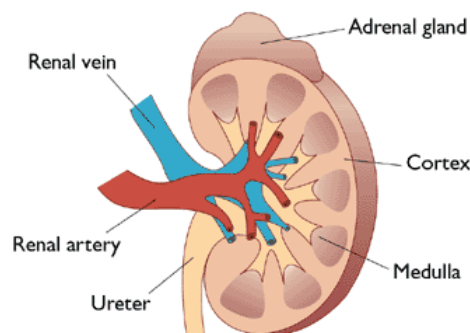
The company's longer-term goal is to develop advanced blood filtration products that significantly improve the portability of currently available filtration devices, which should thereby improve the quality-of-life (QOL) and longevity of individuals afflicted with stage 4 and 5 chronic-kidney disease, or CKD (stage 5 is also known as end-stage renal disease, or ESRD). For this class of patients, Xcorporeal's wearable artificial kidney (WAK) would allow these patients to undergo continuous hemodialysis treatment with minimal disruption to their daily lives using a belt-like device (somewhat akin to the concept of the insulin pump that has become increasingly popular among diabetics, although the WAK will likely be much larger). If successful, the WAK would be a game-changing advancement to the field of dialysis and to dialysis patients directly.

CLINICAL OVERVIEW

Xcorporeal's PAK technology will be used by two distinct patient groups: (1) those requiring treatment for **acute kidney failure** and (2) those requiring **chronic therapy**. A variety of conditions will cause a temporary or permanent reduction in renal function, and when function is severely impaired, individuals must be treated using renal replacement therapy (RRT). Diabetes is the most common cause of ESRD in the US, and acute kidney failure can arise from heart failure, liver failure, kidney stones, cancers, neurological disorders, or traumatic injury to the kidney or surrounding blood vessels. All dialysis technologies artificially replace renal function by filtering the blood, and Xcorporeal intends to improve upon current techniques to create a competitively differentiated technology that allows for more frequent and more portable therapies.

Dialysis Patient Groups – Acute vs Chronic

The natural function of the human kidney is to filter the blood of various substances including electrolytes (salts), urea, uric acids, creatinine, hydrogen ions, and water. Additionally, the kidney helps to maintain a general homeostatic balance within the body, including blood pressure and blood volume. Acute renal failure (ARF) is classified as a rapid reduction in renal function caused by damage to the kidney itself (toxins, medication, disease), occlusion of the urinary tract (medication, kidney stones, cancer), or vascular and other conditions such as infection, or liver failure. ARF patients will require dialysis therapy until healing occurs and renal function is restored enough to discontinue RRT.



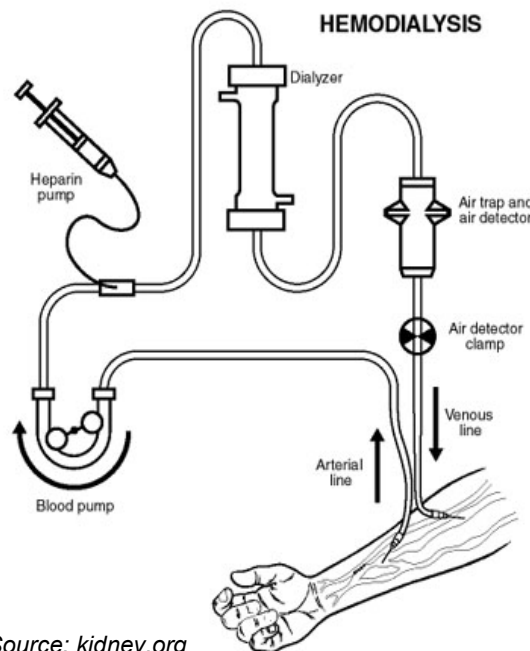
Source: cancerhelp.org.uk

When the kidney begins to lose 10% or more of its function, the individual is diagnosed with chronic kidney disease or (CKD), which is most commonly caused (75% of all adult cases) by diabetic nephropathy, hypertension, and glomerulonephritis. Diagnosis is made by assessing the functional ability of the kidney, determined by measuring the flow rate of filtered fluid (known as the glomerular filtration rate, or GFR) and the rate of creatinine clearance (volume of blood plasma that is cleared of creatinine per unit of time) through the kidney.

Stage	GFR	Description	Treatment stage
1	90+	Normal kidney function but urine or other abnormalities point to kidney disease	Observation, control of blood pressure
2	60-89	Mildly reduced kidney function, urine or other abnormalities point to kidney disease	Blood pressure control, monitoring, find out why.
3	30-59	Moderately reduced kidney function	More of the above, and probably diagnosis, if not already made.
4	15-29	Severely reduced kidney function	Planning for endstage renal failure - more info.
5	14 or less	Very severe, or endstage kidney failure (sometimes call established renal failure)	Peritoneal dialysis, hemodialysis, kidney transplant

Source: Renal Unit at the Royal Infirmary of Edinburgh, Scotland, UK

The progression of CKD is categorized by the physician into stages 1 through 5 (see chart above) as the disease progresses and filtration rate decreases, ultimately to zero. As CKD progresses, the symptoms will be mild at first and usually go unnoticed, and by Stage 4, CKD symptoms will include fatigue, swelling, urination changes, nerve problems, nausea, loss of appetite, and difficulty concentrating. By Stage 5 CKD, an individual will have little or no kidney function and additional symptoms will include the inability to make urine, itching, inability to concentrate, changes in skin color, muscle cramps, and tiredness. Without regular dialysis treatment or a transplant, Stage 5 CKD is fatal. Because of the vital role the kidney plays in the body, patients with stage 5 CKD (also called end-stage renal disease or ESRD) receive treatment which includes regular renal replacement therapy (RRT) using dialysis. See concept diagram to the right.



Source: kidney.org

Leading Dialysis Technology

A hemodialysis system is a mechanical device that artificially replaces some aspects of kidney function through the removal of fluid and waste products. The most commonly used dialysis device today works by drawing blood from the patient intravenously and

creating blood flow through a filter, which is capable of removing excess fluid and waste products before returning the filtered blood into the body. Specifically, the filtration process works by introducing a pressure differential across a semi-permeable membrane filter, which actuates the flow of waste product from the blood into a stream of fresh fluid called dialysate. The dialysate itself is a mixture of water, electrolytes (salts), and sometimes glucose.

Average Creatinine Clearance of hemodialysis Treatments

Treatment Method	Creatinine Clearance
Conventional Hemodialysis (3x week)	10-12 ml/min
Daily Hemodialysis (6x week)	20 ml/min
Xcorporeal Kidney Prototype (Preclinical)	20-40 ml/min
Xcorporeal Kidney Prototype (Clinical)	20 ml/min
Normal Healthy Kidneys	100-125 ml/min

Source: Company Reports; ROTH Capital Partners Research

US Kidney Transplant Volume

2005	17,429
2000	14,592
1995	12,141
1990	10,021
1985	7,501
1980	3,784

Source: USRDS, NIDDK, DHHS

Unfortunately, ESRD patients must either receive a replacement kidney or routinely undergo dialysis in order to survive. With only about 18,000 kidney transplants expected to be performed this year (a number that will only increase to about 20,000 in 2010) and with over 74,000 patients currently

awaiting transplants, demand for kidney transplants significantly outstrips the supply of available kidneys, leaving a number of patients with no alternative to dialysis therapy. The frequency and duration of hemodialysis treatment depends on an individual's remaining kidney function, but most ESRD patients chronically endure 4-hour hemodialysis treatments at least three times per week. Patients usually undergo dialysis at hospitals or dialysis centers, and the dialysis machines are large (several hundred pounds), stationary devices. Large quantities of dialysate are also needed to perform the procedure. Patients, especially those with special needs, can choose to use "portable" or home-based dialysis machines, which are smaller and allow the patient to undergo their treatment in the home setting. However, most of the devices are not truly "portable" on a practical day-to-day basis and still require large quantities of dialysate. For example, as much as 30 liters per treatment are required for the most portable device available today, System One (NxStage Medical). To complicate the issue, although dialysis therapy is required to sustain life, patient compliance becomes difficult to maintain, as 3x per week dialysis can be a very tiring and time-consuming process (some patients will simply cease therapy out of frustration). ESRD patients are essentially tethered to these devices until or unless a transplant becomes available.

10% at 10-Yrs: Dialysis Survival Outlook

1 year (2004 - 2005)	78.3%
2 years (2003-2005)	63.6%
5 years (2000-2005)	32.1%
10 years (1995-2005)	10.3%

Source: USRDS, NIDDK, DHHS

For all of these reasons, the probability of patient survival with ESRD after 10 years of dialysis stands at only 10.3%. Experts generally agree that more continuous dialysis should improve a patient's survival rate, and therefore, an area of active research seeks to determine if home hemodialysis can improve the probability of survival among ESRD patients. Another analysis indicates that at-home therapy, offering improved treatment convenience and frequency, could improve survival by around 50% at each stage of follow-up (see chart below).

What does *Convenience* and *Frequency* mean to patients?

Dialysis Survival Rates	5-Years	10-Years	15-Years
In-Center	64%	48%	23%
At-Home	93%	72%	34%
<i>Improvement At-Home</i>	<i>45.3%</i>	<i>50.0%</i>	<i>47.8%</i>

Source: Single Case Study

PRODUCT PIPELINE

Xcorporeal has an arrangement to supplement its internal R&D development with a third-party developer and manufacturer of medical devices, Aubrey Group, which has been intimately involved in the development of the PAK. Xcorporeal sub-leases space from the Aubrey Group's building in Southern California, allowing for seamless interaction among the engineers of the two firms. The terms of the agreement allows Xcorporeal to terminate it at any time with 30 business days notice.

Xcorporeal's Portable Artificial Kidney (PAK)

Xcorporeal's PAK product is being designed to perform the same clinical functions as existing hemodialysis products, but with the goal of improving the device's ease-of-use and portability characteristics to overcome some of the aforementioned fundamental issues with dialysis. The company has identified that (1) a patient prefers to receive dialysis treatment at home but (2) with a device that must also be light weight and easy to use. Additionally, Xcorporeal's goal of eliminating the need for a water treatment plant or continuous shipments of large volumes of bagged dialysate would represent a significant competitive advantage both from the ease-of-use standpoint, as well as provide significant cost savings.

To be competitive, the company has chosen first to address the portability of the device with a PAK that is estimated to weigh less than 40 lbs, a weight patients should find much more manageable (moveable) than those systems available today. The size of the PAK device will be about two cubic feet or roughly the size of a small desktop printer. Unlike competing devices, the PAK regenerates dialysate using sorbent based toxin removal technology and can complete a dialysis treatment using only 6L of tap water. In our opinion, this feature would represent a major advantage over existing portable dialysis machines that must be linked to a fairly sizeable water treatment plant to function properly.

Comparable Home Hemodialysis Devices

	Fresenius 2008K*	Renal Solutions [†]	NxStage	Xcorporeal
Dialysate/4-hr (Liters)	120	6	20-30	6
Dry Weight (lbs)	160	195	70	35
Portable	No	No	Partial	Yes
Size (cu ft)	16	16	3	1.5
Drainage Required	Yes	No	Yes	No

* Approved for attended use (hospital or center); home installations are off label

[†] Alliant is approved for attended use (hospital or center); it has not yet been commercialized

Source: Company Reports; ROTH Capital Partners Research

Using a typical household water supply, patients will no longer require large quantities of dialysate, which is cumbersome and carries additional costs per treatment. In addition, from a practical perspective, the patient will not have to drain large quantities of fluid by hand or install plumbing to drain excess fluid. To further the company's vision of complete device portability, the machine will plug into any standard wall outlet, and the company's aim is to build a machine that sips power, thereby reducing energy costs to the patient. Finally, Xcorporeal is designing a disposable fluidics cartridge that can be loaded into the machine using only one hand, eliminating the need for a patient to connect tubing. All wetted surfaces are contained in the single use disposable providing a safe and clean dialysis treatment even in less than ideal environments. The cartridge would not only allow the device to be used more easily but also provide an additional level of safety and consistency of treatments.

Acute Renal Failure Dialysis

Xcorporeal's attended use product will provide continuous renal replacement therapy (CRRT) and/or intermittent hemodialysis for acute renal failure CRRT patients in the hospital or clinic. Acute renal failure (ARF) is a rapid decline in the kidney's ability to filter blood of toxic waste. These patients, at a minimum, require short-term renal replacement therapy, ideally continuously rather than intermittently. The company has developed a prototype of this device and is currently bench testing it to confirm its clearing capabilities. The company expects to finalize product design throughout 2008 and file a 510(k) for the attended setting in 4Q08, which would allow for a **2H09 product launch**.

Portable Home Dialysis

Xcorporeal's portable artificial kidney (PAK) will have no functional differences to its attended use product but will be refined for home use without oversight by medical staff. The company's product development goals for the PAK system are to provide the patient with a light-weight product that is easy-to-use (eg one-handed cartridge inserts), requires minimal power consumption, and eliminates the need for large volumes of pre-packaged dialysate. For regulatory approval, the company will begin a clinical study of its PAK product in 1Q09. The trial, which may be conducted in Canada, should involve 25-30 patients. The trial will collect data from a control group of in-center hemodialysis for 8 weeks before using the same patient group to collect 8-week data for unattended, at-home PAK product use. The company expects the trial to take 3-6 months to complete, which would allow it to file a 510(k) for the home-use setting in 3Q09 and **launch the home hemodialysis product in 1Q10**.

Near-Term Milestone Events

Event	Estimated Date
Complete industrial prototype	2Q08
Complete pre-production prototype	3Q08
FDA 510(k) submission, hospital device	4Q08
Start clinical trial, home hemodialysis	1Q09
Launch hospital device	2H09
Complete clinical trial, home hemodialysis	2Q09
Submit home hemodialysis device 510(k)	3Q09
Launch home hemodialysis device	1Q10

Source: Company documents; Roth Capital Partners Research

Xcorporeal's Wearable Artificial Kidney (WAK)

The company's WAK project represents the next generation of hemodialysis technology that is focused on providing patients with the best (continuous) therapy while allowing them complete mobility. Xcorporeal has exclusive license to the wearable artificial kidney technology, which was developed by Dr. Victor Gura (Xcorporeal's Chief Scientific and Medical Officer), a professor at the University of California Los Angeles. Xcorporeal has license to three issued patents and several patents pending covering the WAK technology and successfully tested the WAK in man last year through a study conducted in London.

The device could potentially revolutionize the hemodialysis market by enabling 24-hour renal replacement therapy with a battery-operated light weight device the patient could wear. Under the premise that more frequent dialysis should generate improved patient outcomes, continuous dialysis (that is convenient) would ultimately be the ideal treatment methodology. In a recent study published in *Lancet*, the WAK's clearance rate, if sustained and used continuously, could be more effective than conventional 3x per week or daily hemodialysis therapy. The prototype demonstrated in London looks something like a tool belt (pictured right).



Source: Xcorporeal, Inc.

The WAK's continuous operation would allow significant increases to patient mobility, while holding the potential to show increased probability of patient survival over time (not to mention QOL). Given the nature of the device, it will require a more significant body of clinical evidence that supports a PMA submission. Although we believe this represents a longer regulatory pathway than Xcorporeal's PAK system, it will be necessary not only for market approval but for its clinical viability. In an initial study conducted with the Royal Free Hospital in London, 8 ESRD patients wore the device for an average of 6.4 hours and were able to walk normally while undergoing dialysis treatment. Additionally, no

adverse events were reported and key toxicity levels associated with creatinine, urea, and beta-2-microglobulin decreased substantially. We expect this project to remain in the prototype development phase through much of 2008 and could be **commercialized as early as 2011**.

WAK Development Timeline

Event	Estimated Date
Complete second generation prototype	3Q08
Complete longer duration feasibility studies	2Q09
Finalize Pre-production prototype	2Q10
Begin clinical trial	3Q10
Complete clinical trial	4Q10
Submit PMA to FDA for WAK	1Q11
Launch WAK device	3Q11

Source: Company Reports; ROTH Capital Partners Research

MARKET OPPORTUNITY

Acute Renal Failure

Xcorporeal is developing products it intends to introduce for the **attended (hospital/clinic)** and **unattended (home)** dialysis settings. The majority of acute renal failure (ARF) occurs in the hospital, but non-hospital acquired ARF represents about 15% of the total ARF population. In 2006, about 500,000 patients in the US developed ARF and of those about half are treated using RRT. The other ARF patients are either not severe enough or would not benefit from RRT. In 2005, the prevalence of acute renal failure (ARF) in the US was about 242,000 patients, while Europe was around 124,000 patients (2004 data). The incidence of ARF is growing at around 10% annually, a result of aging populations and increased hospitalizations, among other factors. ARF treatment takes on average about 8 days to treat, with an estimated cost for RRT disposables at around \$100 per patient per day (or around a \$200 million annual market opportunity in the US).

Annual US Critical Care Hemodialysis Market

Disposables Market

Patient hospitalizations requiring RRT	242,000
Average days per hospitalization	8
Revenue per day	\$100
Disposable Market	\$194 million

Device Market

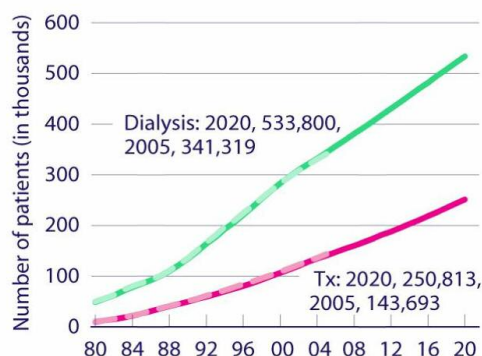
Beds in US	62,000
Beds per device	30
Device ASP	\$30,000
Device Market	\$62 million

Annual US Hospital Hemodialysis Market	\$256 million
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Source: Company Reports; ROTH Capital Partners Research

Chronic Hemodialysis Market

Some of the chronic kidney disease (CKD) patients categorized as stage 4 and the majority of stage 5 (ESRD) patients are treated using RRT. The United States Renal Data System (USRDS) estimates that in 2005 there were ~340,000 ESRD patients in the US receiving regular RRT and today that number has grown to ~357,000. The USRDS has estimated these numbers will grow to 533,000 patients by the year 2020, with the incidence growing from 143,000 2005 to 250,000 in 2020. Recall that CKD patients typically receive RRT chronically, approximately three times per week for a duration of four hours per treatment at dialysis centers. The majority of patients receive reimbursement from Medicare for treatment, about \$125-\$140 per treatment at dialysis centers, which implies a cost burden \$6 billion in the US today.



Source: USRDS

The burden of traveling to dialysis centers several times per week to undergo dialysis treatments is beginning to be addressed by several companies developing and marketing portable dialysis machines that the patient can use in the home setting. Home dialysis currently represents less than 8% of the dialysis market, with the vast majority of use contributed by peritoneal dialysis (another dialysis method that has lost favor with both patients and physicians in recent years). Several hemodialysis devices are also available for use, but represent just 1% of the total dialysis market. In 2008, we estimate the home hemodialysis market opportunity is \$3.5 billion, with the five-year CAGR around 3%.

Chronic Home Hemodialysis Market Opportunity

		2008(E)	2009(E)	2010(E)	2011(E)	2012(E)
	Units					
Patients receiving dialysis	(000)s	357	371	386	401	415
Growth		4%	4%	4%	4%	4%
% Pts. eligible for home hemodialysis		50%	50%	50%	50%	50%
Patients well enough for home hemodialysis	(000)s	179	186	193	201	208
% Pts. Receiving CMS coverage		80%	80%	80%	80%	80%
Annual CMS reimbursement	(000)s	\$18	\$18	\$18	\$18	\$18
Revenue related to CMS patients		\$2,570	\$2,671	\$2,779	\$2,887	\$2,988
% Private pay patients		20%	20%	20%	20%	20%
Estimated private pay reimbursement		\$36	\$36	\$36	\$36	\$36
Revenue related to CMS patients		\$1,285	\$1,336	\$1,390	\$1,444	\$1,494
% of revenue associated with dialysis center fees		10%	10%	10%	10%	10%
Estimated revenue to dialysis center		\$386	\$401	\$417	\$433	\$448
Total market opportunity	MMs	\$3,470	\$3,606	\$3,752	\$3,898	\$4,034

Source: USRDS; Industry sources; ROTH Capital Partners Research

Our estimate uses the USRDS current and estimated number of dialysis patients. About 50% of patients are either well enough or interested in being on home hemodialysis. Dialysis centers are estimated to receive approximately 10% of all revenues. Additionally, revenues will depend on how costs are reimbursed and how the patient population is split by private pay and CMS.

Home Hemodialysis Networks

In the US dialysis market, about 4,500 Medicare-certified dialysis centers exist today. Most of the centers are operated by large dialysis equipment manufacturers such as DaVita and Fresenius. In our opinion, however, several economic incentives for dialysis centers to setup a home dialysis network exist: (1) Home dialysis patients are usually covered by private payors, which can obtain higher reimbursement rates. (2) The centers that siphon the appropriate patients to home dialysis can potentially treat more patients. (3) From a quality-of-life standpoint, both patients and physicians should be driven to home dialysis to improve QOL and ultimately survival rates through more frequent therapy. These variables favoring home hemodialysis devices have been slowed to date by expensive equipment that has not offered true portability.

International Market

Although we understand Xcorporeal's focus to center primarily around the US opportunity for the near future, we believe it is worth defining the international opportunity, which represents a population that could exceed 6x that of the US.

ESRD: A Worldwide Phenomenon (Prevalence, Incidence & Growth)

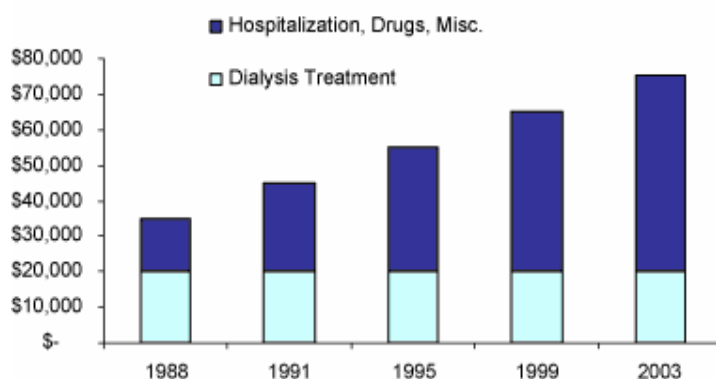
	<i>ESRD Prevalence</i>		<i>ESRD Incidence</i>	
	<i>Per million ppl</i>	<i>Annual change (%)</i>	<i>Per million ppl</i>	<i>Annual change (%)</i>
Australia	658	4.3%	97	3.1%
Belgium	835	4.7%	156	5.7%
Canada	927	6.9%	158	2.9%
France	866	2.7%	123	5.4%
Germany	918	4.7%	174	4.1%
Italy	864	2.4%	142	2.7%
Japan	1801	5.2%	260	2.9%
New Zealand	685	6.1%	119	5.2%
Spain	895	4.1%	131	1.6%
Sweden	756	3.3%	125	-0.2%
United Kingdom	626	3.8%	101	1.8%
United States	1446	3.7%	340	3.3%

Source: Int J Health Care Finance con (2007) 7:73-111

Given this significant prevalence, we believe certain OUS markets could be realistic candidates for Xcorporeal's technology. For instance, a greater proportion of Australians / New Zealanders receive hemodialysis therapy in the home setting, which could provide an attractive region once the company makes progress in the US.

REIMBURSEMENT

Costs associated with the treatment of ESRD patients have risen significantly since the development of erythropoietin stimulating agents, more commonly called ESAs in the late 1980s (Erythropoietin is a hormone produced in the kidney that promotes the formation of red blood cells). Before the development of ESAs, ESRD patients required regular blood transfusions to maintain adequate red blood cell counts, and now physicians can provide treat ESRD patients to target hemoglobin levels. The high cost associated with the ESA therapies is one of the largest economic burdens to CMS, whereas the cost associated with dialysis therapies has remained relatively constant throughout that time.



Source: Aksys

Starting in early 2007, the regulatory environment has focused its efforts to better understand the amount of ESA that physicians should provide for optimal therapeutic benefit to the patient, resulting in a NCD from CMS that lowered targeted hemoglobin levels and effectively amount of ESA that will be used treating ESRD. Simply put, CMS is seeking to lower costs associated with ESRD treatment. It is thought that more frequent dialysis treatment may reduce the amount of ESA needed to maintain normal hemoglobin levels. NxStage is currently conducting the FREEDOM study to better understand the correlation between more frequent hemodialysis and less ESA usage. If successful, CMS could potentially change its dialysis reimbursement to greater than 3x per week, the current standard of care.

Reimbursement Friendly Strategy

Xcorporeal is designing the PAK to appeal not only to patients but to payors as well, which we believe is critical as dialysis centers and payors will be influential in determining the product's success. Therefore, understanding how reimbursement plays into usage can almost be as important as the clinical viability of a dialysis technology.

- First, an inverse relationship typically exists between the weight and size of a portable dialysis device and the dialysate flow rate achieved through that device, and dialysate flow rate is a factor influencing the duration of a dialysis session. So, if the flow rate is too slow, the patient must undergo more frequent dialysis treatment (up to 6x per week) to achieve the adequate therapeutic benefit.
- This would not necessarily present a problem because of the convenience factor, but reimbursement is provided for a certain frequency of testing (CMS usually at 3x per week and more often for private payors).
- As such, CMS and private payors may not reimburse dialysis centers entirely for additional treatments (under the premise that the patient is achieving the same therapeutic benefit), thus weakening the incentive for a dialysis center to implement a home hemodialysis program.

Xcorporeal's strategy seeks to remedy this dilemma with a flow rate they believe will (1) only require 3 treatments per week and (2) provide additional cost savings to the treating center by using tap water instead of bagged dialysate. We estimate Xcorporeal will provide the PAK and disposables to dialysis centers for a monthly fee, similar to NxStage's System One device. We expect Xcorporeal's system to be priced competitively with that of NxStage, around \$1,500 per month for the machine and

disposables. We roughly estimate the following costs and reimbursements associated with PAK home hemodialysis services.

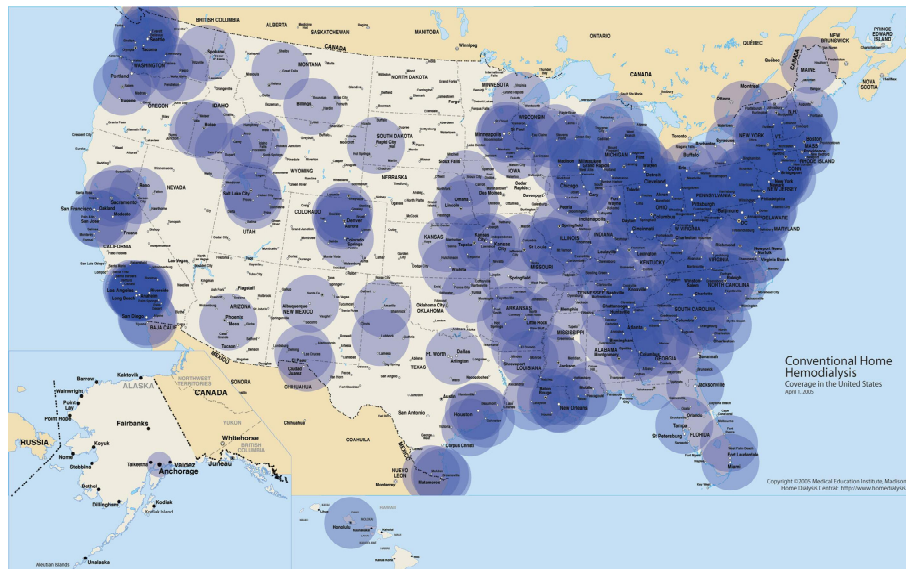
<i>Incentive to Dialysis Center</i>	
Number of Reimbursed Treatments Per Week	3.25
<i>% CMS Reimbursement</i>	80%
CMS Reimbursement Rate Per Treatment	\$140
<i>% of Private Pay</i>	20%
Private Pay Reimbursement Rate Per Treatment	\$250
Average Monthly Reimbursement to Center	\$2,106
<i>PAK</i>	
Monthly Rental Fee (includes disposables)	\$1,500
Dialysis Center Profit	\$606
<i>Dialysis Center Margin using PAK</i>	28.8%
<i>Source: Industry Sources; ROTH Capital Partners Research</i>	

The split between private payor and CMS reimbursement among patients is about 80/20, with home hemodialysis patients currently being more like 60% CMS / 40% private payor today. Private payors reimburse at about two to two and a half times the price as CMS, an incentive for dialysis centers to establish home hemodialysis services. Under the Medicare Second Payor (MSP) program, payors are required to cover ESRD patients for 33 months. Legislative changes, if implemented, may extend MSP coverage requirements to 60 months.

Reimbursement for Chronic Home Hemodialysis

Since dialysis treatment is a chronic, life-long therapy for ESRD patients, the vast majority of hemodialysis patients (~80%) receive Medicare reimbursement per treatment. Standard of care is three treatments per week at an average reimbursement cost around \$125 to \$140 per treatment (about \$1800 per month) from CMS and about \$250 per treatment from private payors. CMS will reimburse for additional treatments per week if a patient has an appropriate medical justification. Currently, there is little visibility as to when or if CMS will change reimbursement levels or coverage for more than three treatments per week, but speculation has been made that payment could be expanded beyond today's level. NxStage Medical is conducting the FREEDOM study, designed to quantify the "clinical benefits and cost savings of daily home therapy administered to Medicare patients with the NxStage System One versus conventional thrice-weekly dialysis." The multi-center, prospective, observational study will enroll up to 500 Medicare patients at up to 70 clinical dialysis centers. If the study demonstrates statistically significant clinical benefit and cost savings, CMS could reevaluate its coverage decision to reimburse greater than thrice weekly treatment. In our opinion, an improvement in reimbursement coverage for home-use (see current status by geography in map below), coupled with the clinical advantages of portable therapy, would be a substantial driver for the home hemodialysis market.

Conventional Home Hemodialysis Center Coverage (2005)



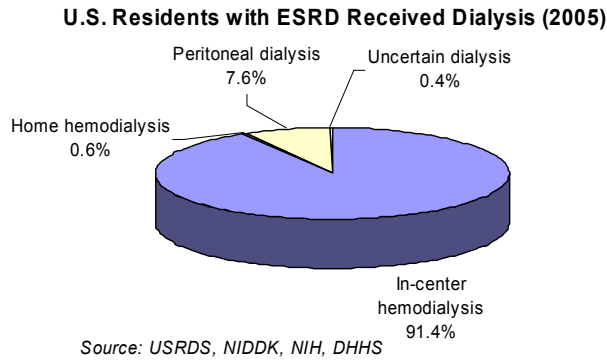
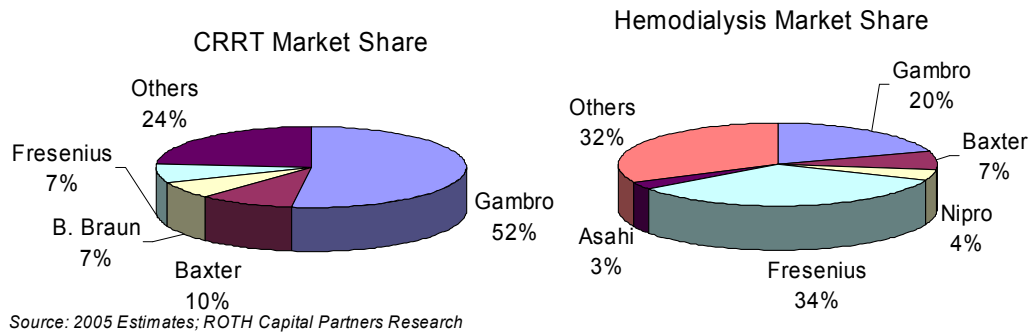
Source: homedialysis.org

Legislative Changes

Private payors are currently mandated to reimburse for ESRD therapies, including dialysis, for 30 months, under the Medicare Second Payor (MSP) program, after which Medicare provides reimbursement for therapies. Legislation has been proposed to extend the requirements of private pay from 30 to 60 months, which would reduce the economic burden on CMS. Since private payors reimburse dialysis centers by about two to two and a half times CMS rates for treatment, this will benefit the growth prospects of home hemodialysis programs considering the slim profit margin that limits its adoption today. We would view this development as key in supporting today's growing level of physician or patient interest.

COMPETITIVE LANDSCAPE

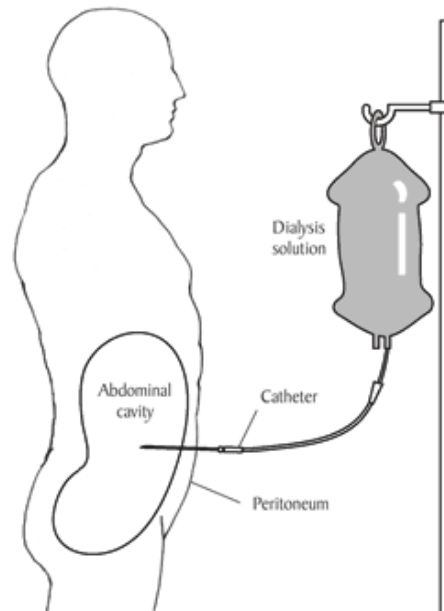
Patients now have the choice to receive conventional treatment (3x per week), daily home hemodialysis (2-3 hour treatments 5-6 days per week), or nocturnal home hemodialysis (6-8 hours 2-3 times per week). These choices represent significant advancements to dialysis treatment over the years and have improved the quality-of-life for many patients. Today, however, the bulk (roughly 90%) of the US hemodialysis market is served by in-center treatment. In large part, these are mature technologies but are differentiated enough to exclude them in a discussion of competition. The primary competitors in the US in-center dialysis equipment market are Fresenius Medical Care AG, Gambro, Baxter, and B Braun, among others.



In the home setting, patients and centers now have increasingly more choices primarily with respect to how often and when they receive treatment, as opposed to being restricted to a schedule defined by dialysis center scheduling. While at-home therapy presents clear advantages to in-center treatment, we believe none of the current home hemodialysis machines are portable enough to easily travel with patients on a regular basis (ie car, airplane or to work). For example, of the four home hemodialysis machines currently available, only the NxStage device weighs under 100 lbs. As of the end of 2007, NxStage had grown its business to include 334 centers and over 2200 patients, after 2½ years of commercial availability. In our opinion, systems that can provide added convenience to patients, and thereby reduce the treatment burden to patients, will hold a significant competitive advantage and continue to gain share in the hemodialysis market.

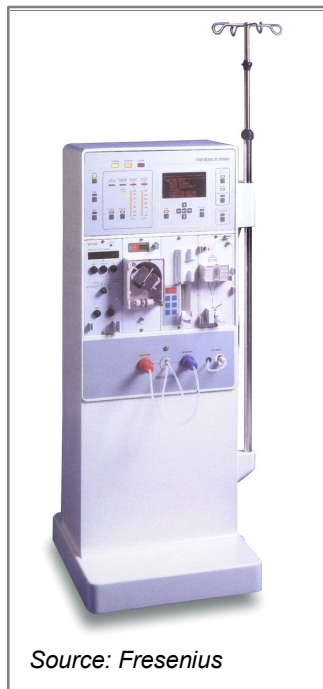
Peritoneal Dialysis

Peritoneal dialysis (PD) is an alternative to hemodialysis used by about 7% of all dialysis patients today as an alternative to in-center dialysis. PD represents the majority of home dialysis therapy today, taking advantage of the fact that waste can diffuse through the lining of the abdominal cavity, or the peritoneal membrane. During PD, dialysate fluid is injected into the abdominal cavity, which allows waste to diffuse through to the dialysate. PD machines are relatively small in size, lightweight, and usually used in the



Source: /kidney.niddk.nih.gov

home. However, the biggest drawback to this low cost method is a higher risk of infection, and peritoneal sclerosis which has limited adoption to date and left PD technology in a fairly mature state today. Market share is declining, and we would expect this trend to continue further, especially as home hemodialysis machines become more portable and easier-to-use. Today, Baxter holds the largest market share in PD machines.



Source: Fresenius

Aksys

Before shutting down its operations in early 2007, Aksys was developing the PHD Personal Hemodialysis System, which provided patients with a home-based machine to perform intermittent non-continuous dialysis. The high cost (\$40k) limited the machine's suitability to mostly private payors. Further, the system weighed 250 lbs, limiting its portability and therefore its appeal in the broader market.

Fresenius & Renal Solutions

Fresenius' 2008k is cleared for under attended use in a center or hospital, but is used off-label in the home setting. The 2008k at-home system weighs about 150 lbs (compared to Xcorporeal's target weight of less than 40 lbs for the PAK) and is therefore not portable for all practical purposes. It also requires a water purification plant and a drainage apparatus be attached. On the other hand, the system has seen some success because of its high dialysate flow rates (up to 800 mL per minute), providing patients with many choices to when and how long they would like to receive treatment.

A Key Technology for Portable Dialysis – Why Xcorporeal is Pursuing its Own Sorbent-Based Dialysate Regeneration

In November 2007, Fresenius acquired Renal Solutions for \$190 million in a move that we believe was primarily stimulated Fresenius' desire to obtain Renal's SORB cartridge technology. Renal Solutions has developed a sorbent-based hemodialysis system, the Allient System, which is cleared by the FDA for the treatment of acute and chronic renal failure in the attended use setting. In comparison to Xcorporeal's targeted system, the Allient System weighs over 4 times that of the Xcorporeal product (system is 16 cubic feet and 195 lbs).

Renal Solutions chose not to market the device even though it had been approved for 2 years at the time of the acquisition. We believe the transaction reflects the growing importance of portable devices not requiring drainage, which leaves sorbent-based technology as an important component for future product development.

B Braun Medical Inc.

B Braun markets the Dialog Plus, a home hemodialysis machine that weighs 187 lbs and has a volume of about 20 cubic feet. The size of the device limits its portability and it has much the same functionality as the Fresenius product, including the need for bagged dialysate. We note that at this time the Dialog Plus is not available in the US.

NxStage

To address the acute (critical care) renal care space, NxStage markets a device called System One, which weighs 75 lbs and is usually offered as a cart-based system. The device is capable of providing intermittent and continuous therapy (CRRT) and can achieve blood flow rates up to 600mL per minute. However, dialysate flow rates are limited to 200mL per minute (or about one-fourth that of Fresenius 2008K), which means that six treatments per week are needed to ensure the full therapeutic effect. The System One was cleared for home setting use in late June 2005 and uses NxStage PureFlow prepackaged fluids when it needs to be portable for car and air travel. When stationary (system pictured right), the black container holds roughly 60L of dialysate. Recently, CMS changed its Conditions of Coverage guidelines (that centers must follow to be a licensed Medicare provider)

to require that patients perform water quality tests on the dialysate. Samples must be shipped for confirmation testing, which has been cited to be generating false positives in roughly 5% to 10% of tests. On NxStage's most recent quarterly conference call (1Q08), this development has created some discomfort among its patient base, thereby providing one variable that caused the company to reduce its FY08 patient addition guidance (now expected to grow roughly 48% at the midpoint).

In terms of pricing, NxStage typically rents its System One equipment in both the critical care and chronic care markets, but if customers elect to purchase System One, the company will sell the device for roughly \$28,000 (NxStage does not sell System One directly to patients). We believe this represents a reasonable estimated pricing model for Xcorporeal. The company does not provide and is not responsible for patient training. NxStage relies on separate marketing and sales efforts directed to each market and distributors to sell products in the in-center market. Additionally, due to its agreements with DaVita, NxStage is limited in its ability to sell the System One to home hemodialysis outpatient facilities controlled by Fresenius, which holds approximately 36% of the 4,500 Medicare-certified centers in the US. We view this limitation as a significant opportunity for a company like Xcorporeal, intending to offer its dialysis system in this segment of the market with little competition from NxStage.



Source: NxStage Medical

Attributes of Home Hemodialysis Devices

	Fresenius 2008K*	Renal Solutions[‡]	NxStage	Xcorporeal
Dialysate/4-hr (Liters)	120	6	20-30	6
Middle molecule clearance	Yes	Minimal	Minimal	Yes
Dry Weight (lbs)	160	195	80	<40
UF Measurement	Volumetric	Scale	Volumetric	Volumetric
Dialysate	Fluid	Sorbent/Fluid	Fluid	Sorbent/Fluid
Portable	No	No	Partial	Yes
Installation Cost	High	Low	Low	Low
Size (cu ft)	16	16	3	1.5
Drainage Required	Yes	No	Yes	No
Blood Flow Rates (ml/min)	20-600	150-400	50-600	50-600
Dialysate Flow Rates	100-800	200-400	50-200	50-500
Dialysate Regeneration	No	Yes	No	Yes

* Approved for attended use (hospital or center); home installations are off label

[‡] Alliant is approved for attended use (hospital or center); it has not yet been commercialized

Source: Company Reports; ROTH Capital Partners Research

What does Xcorporeal's technology offer?

In our opinion, NxStage currently has a best-in-class system for home-use hemodialysis, due to its flow rates and relative portability. In addition, we view the partnership agreement with DaVita (signed in February 2007) validates NxStage's potential in the market and the overall interest in home-care therapy by a dialysis market leader. DaVita made a \$20 million (7% holding) investment in NxStage at that time. We expect Xcorporeal's PAK design will build on the highlights of the NxStage system, while (1) reducing both size and weight required by about 50%, (2) allowing for reduced treatment time for the same therapeutic effect (by delivering a higher flow rate), and (3) needing significantly less volume of dialysate.

	Xcorporeal	NxStage
Size	Target 10" X 16" X 19"	15" X 15" X 18" dialysis system 19" X 20" X 20" Water / Dialysate system
Weight	< 40 Lbs	75 Lbs dialysis system 45 lbs Water / Dialysate System

Potential Competition on the Horizon?

Baxter has publicly stated it is either interested in acquiring or is developing improved systems for the home hemodialysis market. We believe Baxter announced these intentions in conjunction with its collaborative agreement with DEKA Research and Development Corporation and HHD, LLC in August of 2007. Recall, DEKA developed the automated HomeChoice peritoneal dialysis machine, which is now licensed to Baxter. HHD LLC holds certain licenses and intellectual property that will be utilized in the development process, while DEKA will be primarily responsible for the development of the device. We also believe that DEKA acquired certain Aksys IP assets from bankruptcy. Clearly, increasing portability in hemodialysis represents an attractive opportunity, and we would expect the market's leaders to continue developing easier-to-use versions that drive consistent to improved clinical outcomes.

INTELLECTUAL PROPERTY & LEGAL

As of December 31, 2007 Xcorporeal had exclusive licenses to 3 issued patents, covering the wearable continuous renal replacement therapy device (or WAK) issued in 2005 and 2007. The company also has exclusive licenses to “several” pending U.S. patent applications and the company has a total of 15 U.S. pending patent applications. Xcorporeal seeks to expand its patent portfolio to certain key features to its design, in addition to a strategy of maintaining trade secrets. We believe Xcorporeal’s intellectual property strength is based on the use of its “low hydraulic resistant cartridge”, “dual-ventricle pump cartridge, pump”, and use of residential water sources instead of dialysate.

Legally, the company is currently wrapping up an arbitration that was initiated on December 1, 2006 against National Quality Care (NQCI) for failing to execute on its obligations under a licensing agreement between the two companies. In turn, NQCI filed a suit against Xcorporeal on December 29, 2006, after which Xcorporeal filed a petition for arbitration (January 5, 2007). The February 29, 2008 arbitration hearing and late April briefing should lead to an arbitration award during 2Q08. Xcorporeal’s legal advisors have indicated that “there is [no] reasonable likelihood that NQCI will prevail ... and the arbitrator is likely to rule in [Xcorporeal’s] favor.”

FINANCIAL OVERVIEW & OUTLOOK

Since inception (May 2001), the company has reported a loss of \$21.6 million. In FY07, Xcorporeal reported a net loss of \$17 million, wider than its FY06 loss of \$4.4 million, reflecting a significant ramp in expenditures related to the development of the PAK device and expansion of the management team. 1Q08 net loss came in at \$6.4 million, which included about \$1 million in pre-tax legal expenses, which should not persist in 2H08. The company ended 1Q08 with roughly \$13 million in cash on its balance and no debt, which we believe leaves Xcorporeal in a position to need to raise capital in order to fund its product development initiatives; we estimate the company will require a capital raise within the next two quarters.

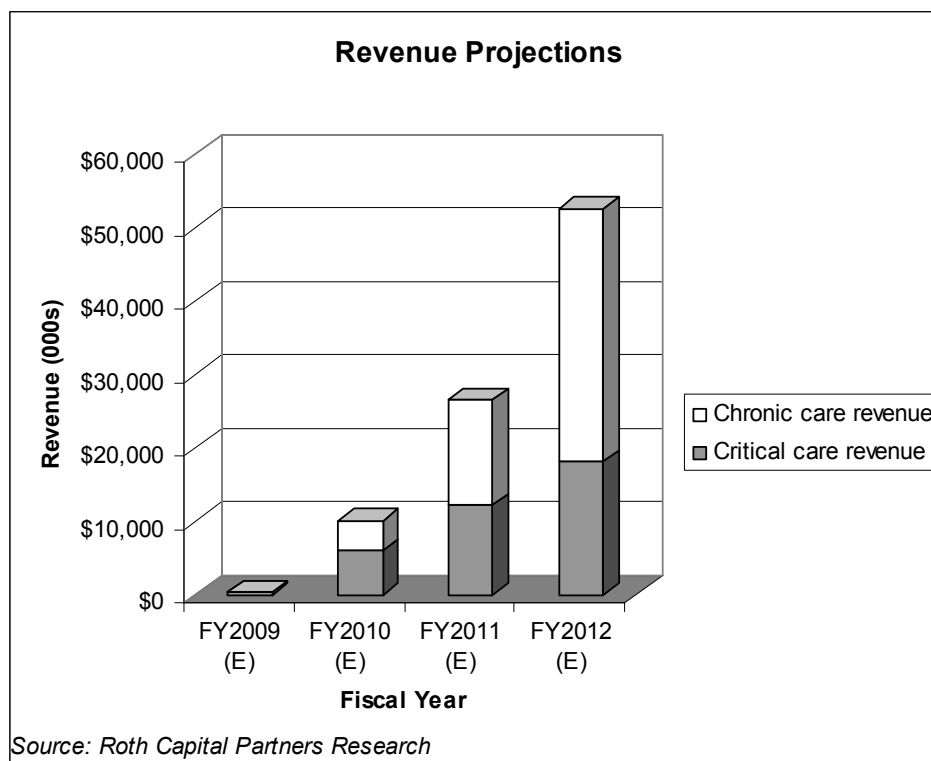
NxStage Rollout

	FY05		FY06				FY07				FY08	FY08
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	Guidance
Hospitals	42	50	54	58	66	77	82	93	100	115	126	
YoY Grth					57%	54%	52%	60%	52%	49%	54%	
QoQ Grth		19%	8%	7%	14%	17%	6%	13%	8%	15%	10%	
Crit Care Revs	625	700	1,600	1,881	1,900	2,700	2,900	3,285	3,300	4,900	4,300	
Revenue per Hospital	\$14,879	\$14,000	\$29,630	\$32,434	\$28,788	\$35,065	\$35,366	\$35,324	\$33,000	\$42,609	\$34,127	

	FY05		FY06				FY07				FY08	FY08
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	Guidance
Centers	53	70	97	126	157	174	200	265	306	334	355	
YoY Grth					196%	149%	106%	110%	95%	92%	78%	
QoQ Grth		32%	39%	30%	25%	11%	15%	33%	15%	9%	6%	
Patients per center	4.0	4.2	4.7	5.3	5.7	5.9	6.5	6.1	6.4	6.7	7.0	
Patients	212	292	459	663	900	1022	1295	1615	1957	2223	2481	3300
YoY Grth					325%	250%	182%	144%	117%	118%	92%	48%
QoQ Grth		38%	57%	44%	36%	14%	27%	25%	21%	14%	12%	
Home Revs	872	1,300	1,800	2,665	3,600	4,600	5,400	6,746	8,300	9,300	10,500	
Revenue per patient	\$4,112	\$4,452	\$3,922	\$4,020	\$4,000	\$4,501	\$4,170	\$4,177	\$4,241	\$4,184	\$4,232	

Source: Company Reports; Roth Capital Partners Research

Going forward, we are anticipating the company to begin generating its initial revenue in late 2009, assuming successful product development and regulatory approval for its PAK device in the hospital. Using NxStage’s rollout (starting in 2005, see chart above) as an analog, we are more conservatively looking for revenue to grow from \$300k in FY09 to \$10.1 million in FY10, which will grow to \$27 million in FY11 (driven by the company’s anticipated push into the chronic and critical care markets). We view these projections as potentially beatable (assuming regulatory approvals), particularly given the competitive advantages pursued by Xcorporeal’s PAK device.



From a capital needs standpoint, we are projecting the company to generating a cumulative net loss of just under \$80 million over the next 3 years, which will require a significant capital raise in the near future.

MANAGEMENT

Terren Peizer, Executive Chairman, is also Chairman and CEO of Hythiam, which he founded in 2003. He was appointed as a Director and our Chairman in August 2006. His prior experience includes serving as Chief Executive Officer at Clearant for 4 years and President and Vice Chairman of Hollis-Eden Pharmaceuticals. Mr. Peizer has a background in venture capital, investing, mergers and acquisitions, corporate finance, and previously held senior executive positions with the investment banking firms Goldman Sachs, First Boston and Drexel Burnham Lambert. He earned his bachelors in Finance from The Wharton School of Finance and Commerce.

Daniel Goldberger, Chief Executive Officer, served as President and Chief Operating Officer from October 2006 to August 2007 before becoming the CEO in February 2008. Mr. Goldberger concurrently serves as the Chief Executive Officer of Sound Surgical Technologies, a privately held medical device company. From 2004 to 2006 Mr. Goldberger served as CEO for Glucon Inc. From 2001 to 2004 Mr. Goldberger served as President and as a Director of the Medical Group of OSI Systems, Inc., a group having revenues approaching \$250 million. Mr. Goldberger brings more than 25 years of management experience with large and small medical device companies to his current position at Xcorporeal. Mr. Goldberger holds a B.S.M.E. from Massachusetts Institute of Technology and an M.S.M.E. from Stanford University.

Victor Gura, MD, Chief Medical and Scientific Officer, since December 2006, and became a member of the Board of Directors in October, 2006. He served as Chief Scientific Officer for National Quality Care, Inc. from 2005 to November 2006. Dr. Gura is formerly the Chairman of the Board, President and Chief Executive Officer. Dr. Gura is board certified in internal medicine/nephrology. Since 1980, Dr. Gura has been a director and principal shareholder of Medipace Medical Group, Inc., Los Angeles, California. Dr. Gura has been an attending physician at Cedars-Sinai Medical Center since 1984 and medical director of Los Angeles Community Dialysis since 1985. Additionally, Dr. Gura serves as a Clinical Assistant Professor at UCLA School of Medicine. Dr. Gura holds an M.D. from the School of Medicine at Buenos Aires University.

Winson Tang, MD, FACP, Chief Operating Officer, has held drug development positions at Amgen, Vertex, Tularik and Isis Pharmaceuticals. During his biopharmaceutical career, he has successfully filed four Investigational New Drug Applications and Clinical Trial Applications, two Biologic License Applications, in-licensed a preclinical drug candidate that is now marketed (Sensipar[®]) and commercialized 2 drugs (Infergen[®] and Aranesp[®]). Both Sensipar[®] and Aranesp[®] are important therapies for patients with ESRD. Dr. Tang is a graduate of The Albert Einstein College of Medicine and completed a Residency in Internal Medicine (University of Southern California), Clinical Fellowship in Nephrology (University California San Diego) and Research Fellowship in Immunology (The Scripps Research Institute).

Robert Weinstein, Chief Financial Officer, joined the company in August 2007. Prior to coming to Xcorporeal, Mr. Weinstein served as Vice President, Director of Quality Control & Compliance of Citi Private Equity Services, a worldwide private equity fund administrator and accounting service provider. In 2005, Mr. Weinstein was the Founder, Finance & Accounting Consultant for EB Associates, LLC, Irvington, NY, an entrepreneurial service organization. From 2003 to 2004, Mr. Weinstein served as the Chief Financial Officer for Able Laboratories, Inc., a generic pharmaceutical manufacturer and distributor. Prior to Able Labs, Mr. Weinstein held positions as a Managing Director and private equity fund manager, a banker with GE Capital Corporation and public accountant with Coopers and Lybrand. He received his MBA in Finance & International Business from the University of Chicago, Graduate School of Business and a B.S. in Accounting from the State University of New York at Albany. Mr. Weinstein is a non-practicing Certified Public Accountant.

Nina Peled, Ph.D., Senior Vice President of Quality Assurance and Regulatory Affairs, came to Xcorporeal in January 2007 after serving as Vice President, Quality and Regulatory Affairs with Hansen Medical, leading the quality and regulatory functions engaged in the development of a complex robotic system that controls and manipulates the placement of catheters in the chambers of the heart. Her prior experience includes regulatory leadership roles at Amira Medical, Cygnus and i-Stat Corporation. Dr. Pelan received a B.S. in Physics and Chemistry, an M.S. in Physical Organic Chemistry and a Ph.D. in Physical Chemistry from Hebrew University of Jerusalem, and an MBA from University of Houston.

James Braig, Senior Vice President of Product Development, has over 30 years of product development experience in the medical device industry, including leadership positions at OptiScan Biomedical and Square One Technology. Mr. Braig received his B.S. in Physics and M.S. in Electrical Engineering from University of Cincinnati.

Russell T Joseph, M.S., Vice President of Disposables Engineering, came to Xcorporeal from Gish Biomedical, a developer and manufacturer of cardiopulmonary medical devices, Prior to Gish he served as the Director of Engineering at Sorin Biomedical from 1997 to 1999 and from 1983 to 1997 at Baxter Healthcare.. Mr. Joseph received a B.S. in Medical Technology from the University of Massachusetts, an M.S. in Biochemistry from Temple University, and an M.S. in Engineering Management from the University of Southern California.

Barry Fulkerson, Vice President of Hardware Systems, has over 20 years of experience in the dialysis industry. Importantly, from 1999 until 2006, he served as the Director of Hardware Systems for NxStage Medical, which developed the first true portable home dialysis machine. Mr. Fulkerson led the electronics & software efforts from conception to final product. Mr. Fulkerson earned a BS in Electrical Engineering at Western Kentucky University.

VALUATION

Our valuation analysis for XCR is based on two methods, (1) a discounted price to sales multiple sensitivity analysis based on our FY12 revenue projection and (2) comparable trading and transaction valuations.

		<i>Price to FY12 Sales Multiple</i>			
		3.5	4.0	4.5	5.0
<i>Discount Rate</i>	15%	\$5.94	\$6.79	\$7.64	\$8.48
	20%	\$4.95	\$5.66	\$6.37	\$7.07
	25%	\$4.08	\$4.66	\$5.25	\$5.83
	30%	\$3.32	\$3.79	\$4.26	\$4.74

Based on our current FY12 revenue projection of ~\$50 million and the potential market opportunity that could be served by Xcorporeal's technology, we believe a reasonable valuation for XCR stands in the range of \$5 to \$7 today, which assumes a 20% discount rate and sales multiples ranging from 3.5x to 5.0x sales. This valuation assumes 19 million fully diluted shares, versus 14.4 million outstanding today.

Market Value / Cap of Comparable Companies

<i>NXTM</i>	\$190
<i>Renal Solutions Acquisition</i>	\$190
<i>XCR</i>	\$38

In addition, two direct comparables exist today. NxStage Medical garners a \$190 million trading market capitalization today, and Renal Solutions was recently acquired by Fresenius for \$190 million. We understand that a significant impetus for this transaction was Renal Solutions' sorbent technology, which Xcorporeal is also developing. These (absolute) valuation levels would imply a \$10 value for shares of XCR, again assuming 19 million fully diluted shares.

RISKS

Xcorporeal is an early-stage advanced technology company with a relatively short operating history. The long-term success of its products will be dependent on third party payors providing appropriate levels of reimbursement or else revenues could be adversely affected. The company's products could encounter regulatory setbacks and delays that could adversely affect the company's revenue and profitability timelines. The company may also have challenges to its intellectual property. The company's portable kidney dialysis products will need to compete with several products currently on the market and could encounter competitive challenges that make it difficult to gain market share.

There exist a number of risks that could impede the realization of our estimates. Foremost, our projections rely heavily on the launch and adoption of Xcorporeal's dialysis products. With a constantly evolving competitive landscape, any unforeseen product and price competition, along with product malfunctions or defects, could hamper or accelerate future sales growth and accordingly affect the value of shares of XCR.

COMPANY DESCRIPTION

Xcorporeal, Inc., a medical device company, is developing an extra-corporeal platform of products that might be used in devices to replace the function of various human organs. The platform focuses on the devices for home and hospital renal replacement therapy, and the wearable artificial kidney device for patients with end-stage renal disease. The company was founded in 2001. It was formerly known as Pacific Spirit, Inc. and

changed its name to Xcorporeal, Inc. in 2006. Xcorporeal, Inc. is based in Los Angeles, California.

MENTIONED COMPANIES

Xcorporeal (XCR) Revenue and Earnings Model (in \$ thousands)																			
May 27, 2008	FY	FY 2008				FY	FY 2009				FY	FY 2010				FY	FY	FY	FY
Fiscal Year End: December 31	2007	Q1	Q2	Q3	Q4	2008 (E)	Q1	Q2	Q3	Q4	2009 (E)	Q1	Q2	Q3	Q4	2010 (E)	2011 (E)	2012 (E)	2013 (E)
		Mar	Jun (E)	Sep (E)	Dec (E)		Mar (E)	Jun (E)	Sep (E)	Dec (E)		Mar (E)	Jun (E)	Sep (E)	Dec (E)				
<i>Product sales growth - qtr./qtr.</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	50.16%	36.81%	32.63%				
<i>Product sales growth - yr. / yr.</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3172.82%	162.12%	97.66%	56.06%
Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10	\$ 300	\$ 310	\$ 1,394	\$ 2,093	\$ 2,863	\$ 3,797	\$ 10,146	\$ 26,594	\$ 52,564	\$ 82,031
Cost of revenues	-	-	-	-	-	-	-	-	12	450	462	1,812	1,883	2,863	3,000	9,557	18,483	24,966	33,592
Gross profit	-	-	-	-	-	-	-	-	(2)	(150)	(152)	(418)	209	-	797	589	8,111	27,598	48,439
Operating Expenses:																			
Selling, general and administrative	11,084	3,750	2,725	2,786	2,856	12,117	2,942	2,986	3,023	3,099	12,049	3,176	3,200	3,488	3,802	13,666	19,305	22,805	23,226
Research and development	7,141	2,732	2,550	2,614	2,679	10,575	2,746	2,774	2,774	2,746	11,039	2,746	2,718	2,691	2,664	10,820	10,238	9,443	10,107
Total operating expenses	18,257	6,505	5,300	5,427	5,564	22,795	5,718	5,791	5,830	5,879	23,218	5,958	5,957	6,219	6,508	24,643	29,735	32,480	33,615
Operating income (loss)	(18,257)	(6,505)	(5,300)	(5,427)	(5,564)	(22,795)	(5,718)	(5,791)	(5,832)	(6,029)	(23,370)	(6,376)	(5,747)	(6,219)	(5,711)	(24,054)	(21,624)	(4,882)	14,824
Other	1,185	156	-	-	-	156	-	-	-	-	-	-	-	-	-	-	-	-	-
Income (loss) before income tax expense	(17,072)	(6,349)	(5,300)	(5,427)	(5,564)	(22,639)	(5,718)	(5,791)	(5,832)	(6,029)	(23,370)	(6,376)	(5,747)	(6,219)	(5,711)	(24,054)	(21,624)	(4,882)	14,824
Income tax expense (benefit)	2	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	121	5,188
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-2.5%	35.0%
Net Income	(17,074)	(6,350)	(5,300)	(5,427)	(5,564)	(22,641)	(5,718)	(5,791)	(5,832)	(6,029)	(23,370)	(6,376)	(5,747)	(6,219)	(5,711)	(24,054)	(21,624)	(5,003)	9,635
EPS Basic	(1.21)	(0.44)	(0.37)	(0.28)	(0.28)	(1.37)	(0.29)	(0.29)	(0.29)	(0.30)	(1.17)	(0.32)	(0.28)	(0.31)	(0.28)	(1.19)	(1.04)	(0.24)	0.45
EPS Diluted	\$ (1.21)	\$ (0.44)	\$ (0.37)	\$ (0.28)	\$ (0.28)	\$ (1.37)	\$ (0.29)	\$ (0.29)	\$ (0.29)	\$ (0.30)	\$ (1.17)	\$ (0.32)	\$ (0.28)	\$ (0.31)	\$ (0.28)	\$ (1.19)	\$ (1.04)	\$ (0.24)	\$ 0.45
Shares outstanding - basic	14,174	14,383	14,483	19,583	19,683	17,033	19,783	19,883	19,983	20,083	19,933	20,183	20,283	20,383	20,483	20,333	20,733	21,133	21,533
Shares outstanding - diluted	14,174	14,383	14,483	19,583	19,683	17,033	19,783	19,883	19,983	20,083	19,933	20,183	20,283	20,383	20,483	20,333	20,733	21,133	21,533
<i>EPS growth - yr. / yr.</i>	NM					13.2%					-14.6%					1.7%	-12.6%	-76.9%	-287.5%
Margin Analysis:																			
<i>Gross margin</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-49%	-30%	10%	0%	21%	6%	30%	53%	59%
<i>Selling, general and administrative</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3887%	228%	153%	122%	100%	135%	73%	43%	28%
<i>Research and development</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3561%	197%	130%	94%	70%	107%	38%	18%	12%
<i>Operating margin</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-7539%	-458%	-275%	-217%	-150%	-237%	-81%	-9%	18%
<i>Net profit margin</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-7539%	-458%	-275%	-217%	-150%	-237%	-81%	-10%	12%

Model assumes a 5 million share equity financing in 3Q08
Source: Company Reports and Roth Capital Partners Estimates

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Xcorporeal (XCR) May 27, 2008	FY2009				FY2010				FY2011				FY2009 (E)	FY2010 (E)	FY2011 (E)	FY2012 (E)	FY2013 (E)
	Q1 Mar (E)	Q2 Jun (E)	Q3 Sep (E)	Q4 Dec (E)	Q1 Mar (E)	Q2 Jun (E)	Q3 Sep (E)	Q4 Dec (E)	Q1 Mar (E)	Q2 Jun (E)	Q3 Sep (E)	Q4 Dec (E)					
Rev. Growth - Qrt. / Qrt.	NM	NM	NM	NM	364.5%	50.2%	36.8%	32.6%	30.8%	24.4%	15.8%	15.9%	NM	NM	NM	NM	NM
Rev. Growth - Yr. / Yr.	NM	NM	NM	NM	NM	NM	NM	NM	256.4%	195.2%	149.9%	118.5%	NM	3172.8%	162.1%	97.7%	56.1%
Total Revenue	\$ -	\$ -	\$ 10	\$ 300	\$ 1,394	\$ 2,093	\$ 2,863	\$ 3,797	\$ 4,966	\$ 6,178	\$ 7,155	\$ 8,295	\$ 310	\$ 10,146	\$ 26,594	\$ 52,564	\$ 82,031
HOSPITAL DEVICE																	
# of Critical Care Hospitals	0	0	1	20	35	45	55	65	75	85	90	100	20	65	100	135	200
YoY Grth	NM	NM	NM	NM	NM	NM	5400%	225%	114%	89%	64%	54%	NM	225.0%	53.8%	35.0%	48.1%
QoQ Grth	NM	NM	NM	1900%	75%	29%	22%	18%	15%	13%	6%	11%	NM	NM	NM	NM	NM
Revenue per hospital			\$10.000	\$15.000	\$28.500	\$30.000	\$30.000	\$31.000	\$32.500	\$35.000	\$35.000	\$37.500	\$15.500	\$92.500	\$123.125	\$134.722	\$131.250
Critical care revenue	-	-	10	300	998	1,350	1,650	2,015	2,438	2,975	3,150	3,750	310	6,013	12,313	18,188	26,250
YoY Grth	NM	NM	NM	NM	NM	NM	16400%	572%	144%	120%	91%	86%	NM	NM	104.8%	47.7%	44.3%
QoQ Grth	NM	NM	NM	2900%	233%	35%	22%	22%	21%	22%	6%	19%	NM	NM	NM	NM	NM
% of Sales	NM	NM	100%	100%	72%	65%	58%	53%	49%	48%	44%	45%	100%	59%	46%	35%	32%
HOME DEVICE																	
# of Centers Offering XCR Home Therapy	-	-	-	-	30	50	70	90	115	145	155	180	-	90	180	325	425
YoY Grth	NM	NM	NM	NM	NM	NM	NM	NM	283%	190%	121%	100%	NM	NM	100.0%	80.6%	30.8%
QoQ Grth	NM	NM	NM	NM	NM	67%	40%	29%	28%	26%	7%	16%	NM	NM	NM	NM	NM
Net Patients per center (including churn)					4.0	4.2	4.5	5.0	5.5	6.0	6.0	6.5		5.0	6.5	8.0	9.0
Chronic patients on therapy					120	210	315	450	633	870	930	1,170	-	450	1,170	2,600	3,825
Revenue per patient					\$3.300	\$3.300	\$3.300	\$3.300	\$3.300	\$3.000	\$3.000	\$3.000		\$9.185	\$12.206	\$13.222	\$14.583
YoY Grth	NM	NM	NM	NM	NM	NM	NM	NM	427%	314%	195%	160%	NM	NM	160.0%	122.2%	47.1%
QoQ Grth	NM	NM	NM	NM	NM	75%	50%	43%	41%	38%	7%	26%	NM	NM	NM	NM	NM
Chronic care revenue	-	-	-	-	396	743	1,213	1,782	2,529	3,203	4,005	4,545	-	4,133	14,281	34,376	55,781
YoY Grth	NM	NM	NM	NM	NM	NM	NM	NM	539%	331%	230%	155%	NM	NM	245.5%	140.7%	62.3%
QoQ Grth	NM	NM	NM	NM	NM	88%	63%	47%	42%	27%	25%	13%	NM	NM	NM	NM	NM
% of Sales					28%	35%	42%	47%	51%	52%	56%	55%	0%	41%	54%	65%	68%

Source: Company Reports and Roth Capital Partners Estimates

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Xcorporeal (XCR) May 27, 2008 Key Ratios	Q3-06 Sep	Q4-06 Dec	Q1-07 Mar	Q2-07 Jun	Q3-07 Sep	Q4-07 Dec	Q1-08 Mar
Liquidity							
Current Ratio	-	12.90	16.81	17.67	8.42	8.38	4.45
Acid-Test Ratio	-	12.86	16.72	15.26	8.29	8.18	4.29
Financing							
Long-Term Debt to Equity	NM	NM	NM	NM	NM	NM	NM
Total Debt to Capitalization	NM	NM	NM	NM	NM	NM	NM
Activity							
Inventory Turnover	NM	NM	NM	NM	NM	NM	NM
Accounts Receivable Turnover	NM	NM	NM	NM	NM	NM	NM
Days in Inventory	NM	NM	NM	NM	NM	NM	NM
Days Sales Outstanding	NM	NM	NM	NM	NM	NM	NM
Profitability							
Return on Equity	NM	NM	NM	NM	NM	NM	NM
Return on Assets	NM	NM	NM	NM	NM	NM	NM
Per Share Ratios							
Sales per Share	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash and Invest. per Share	-	4.19	4.06	1.42	1.43	1.18	0.92
Long-Term Debt per Share	NA	NA	NA	NA	NA	NA	NA
Tang. Book Value per Share	(0.18)	3.88	3.85	1.55	1.30	1.08	0.76

Xcorporeal (XCR) May 27, 2008 Balance Sheet Data (in \$ 000)	Q3-06 Sep	Q4-06 Dec	Q1-07 Mar	Q2-07 Jun	Q3-07 Sep	Q4-07 Dec	Q1-08 Mar
Assets							
Cash and cash equivalents	\$ -	\$ 27,441	\$ 25,142	\$ 20,107	\$ 20,370	\$ 16,576	\$ 13,040
Accounts receivable	NM	NM	NM	NM	NM	NM	NM
Inventories	NM	NM	NM	NM	NM	NM	NM
Other current assets	-	90	134	171	314	408	480
Total current assets	-	27,531	25,277	20,277	20,684	16,985	13,520
Property and equipment	-	3	38	56	196	267	309
Other assets	1	1	13	1	1	1	1
Total assets	\$ 1	\$ 27,536	\$ 25,328	\$ 20,334	\$ 20,881	\$ 17,253	\$ 13,831
Liabilities and shareholders' equity							
Total current liabilities	1,062	2,133	1,504	1,318	2,457	2,027	3,037
Total liabilities	1,062	2,133	1,504	1,318	2,457	2,027	3,037
Total shareholders' equity	(1,061)	25,402	23,824	22,017	18,424	15,226	10,794
Total liabilities and shareholders' equity	\$ 1	\$ 27,536	\$ 25,328	\$ 23,334	\$ 20,881	\$ 17,253	\$ 13,831

Source: Company Reports

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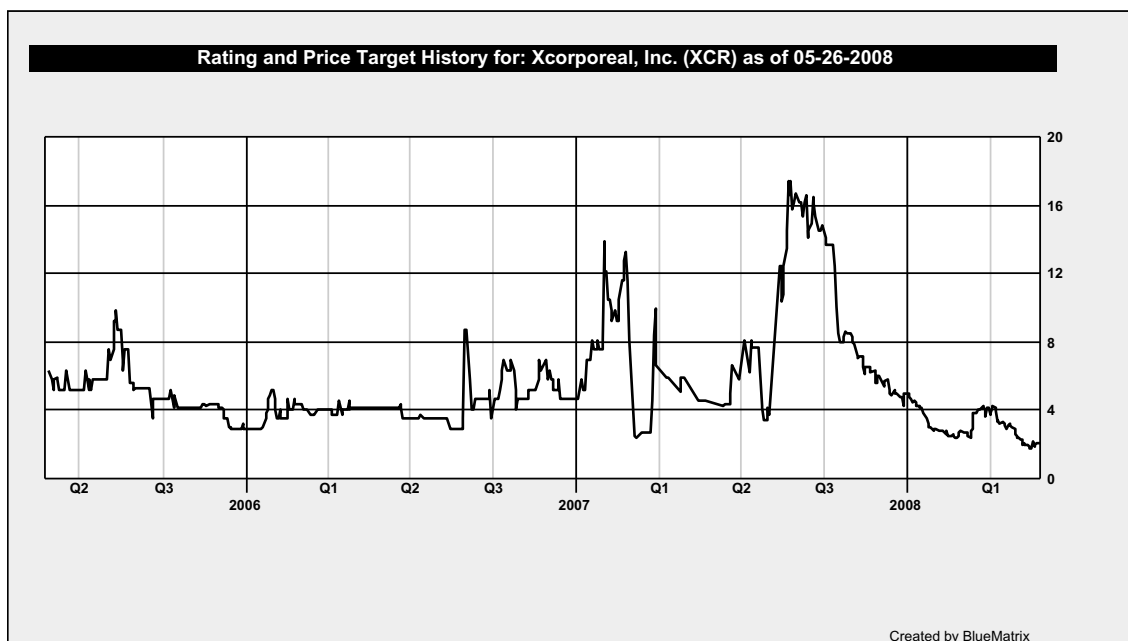
Xcorporeal (XCR) May 27, 2008 Cash Flow Statement (in \$ thousands)	2006	2007				2008
	Q4 Dec	Q1 Mar	Q2 Jun	Q3 Sep	Q4 Dec	Q1 Mar
Cash flows used in operating activities						
Net Loss for the Period	(4,380)	(4,875)	(2,789)	(4,471)	(4,939)	(6,350)
Adjustments to reconcile net loss to net cash (used in) operating activities:						
Non-employee Stock Based Compensation	2,163	2,658	137	128	(6)	75
Stock Based Compensation	264	639	844	750	1,488	1,121
Common Stock Issuance pursuant to consulting agreement	-	-	-	-	98	722
Depreciation and amortization	0	2	4	9	17	22
Net Change in assets and liabilities:						
Prepaid Expenses & Other Current Assets	90	(62)	(18)	(143)	(94)	(72)
Other Assets	125	(9)	-	-	9	-
Accounts Payable and Accrued Liabilities	1,990	(620)	(186)	1,339	(477)	1,010
Other Current Liabilities	125	(9,276)	-	-	9	-
Net Cash (Used in)/Provided By Operating Activities	71	(2,263)	(2,014)	(2,588)	(3,903)	(3,471)
Cash Flows from Investing Activities						
Capital Expenditures	(3)	(36)	(22)	(149)	(88)	(65)
Restricted Cash	-	(75)	(8)	(5)	20	0
Purchase of marketable securities	-	(24,623)	(377)	3,067	(3,067)	(8,598)
Sale of marketable securities	-	-	2,323	-	6,275	12,048
Net Cash (Used in) Investing Activities	(3)	(24,734)	(1,917)	(2,913)	(3,139)	(3,385)
Cash Flows from Financing Activities						
Capital Stock issued	27,343	-	-	-	-	-
Advances from related party	30	-	-	-	-	-
Additional Proceeds from the Sale of Common Stock in 2006	-	-	-	-	199	-
Net Cash Provided by Financing Activities	27,374	-	-	-	199	-
Increase/(decrease) in cash during the period	27,441	(26,997)	(97)	325	(566)	(87)
Cash, beginning of the period	-	27,441	444	347	682	106
Cash, end of the period	27,441	444	347	682	106	20

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Disclosures:



Each box on the Rating and Price Target History chart above represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first note written during the past three years. **Distribution Ratings/IB Services** shows the number of companies in each rating category from which Roth or an affiliate received compensation for investment banking services in the past 12 month.

Distribution of IB Services Firmwide

Rating	Count	Percent	IB Serv./Past 12 Mos. as of 05/27/08	
			Count	Percent
BUY [B]	124	56.36	17	13.71
HOLD [H]	56	25.45	5	8.93
SELL [S]	2	0.91	0	0
NOT RATED [NR]	38	17.27	12	31.58

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Buy: A security, which at the time the rating is instituted and or reiterated, indicates an expectation of a total return of at least 10% over the next 12 months.

Hold: A security, which at the time the rating is instituted and or reiterated, indicates an expectation of a total return between negative 10% and 10% over the next 12 months.

Sell: A security, which at the time the rating is instituted and or reiterated, indicates an expectation that the price will depreciate by more than 10% over the next 12 months.

Not Rated: A security which at the time the rating is instituted and or reiterated, indicates that we have no opinion or expectations as to the price of the security over the next 12 months.

Not Covered (NC): ROTH does not publish research or have an opinion about this security.

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