Creating a Paradigm Shift in Renal Care
INTRODUCTION

About Quanta

Quanta is a pioneering medical devices company developing advanced haemodialysis systems for use both in the home and dialysis centre setting. SC+ is a high performance, portable, compact haemodialysis system providing clinical efficacy utilising flow rates typically used on traditional machines. SC+ supports the entire ‘Continuum of Care’ for dialysis patients, from nurse assisted treatment through self-care to home haemodialysis. Our system facilitates the seamless transition between treatment modalities providing the best tool to enable flexibility for patients.

About End Stage Renal Disease and Haemodialysis

Lifestyle choices, modern diet and increased life expectancy are all negatively impacting renal health across the globe, with end stage renal disease affecting millions of patients worldwide. Haemodialysis is a lifesaving treatment delivered to over 2 million people globally — with this figure expected to double in the next decade.

At present, haemodialysis is primarily provided by specialist clinics and centres. However, this means that the patient is not in control of when they can dialyse. It is clinically proven that more regular dialysis improves outcomes and quality of life for the patient,(1) and a number of studies have shown that 30-40% of patients would be capable of performing self-dialysis(2).

Issues of patient benefit, cost and clinic capacity are driving the growth of home and self-care modalities of haemodialysis. However, a major factor limiting the growth of self-care and home haemodialysis is the lack of convenient, portable and easy-to-use dialysis systems. SC+ addresses these issues and puts patients at the centre, allowing them to take greater control of their treatment.
THE QUANTA SOLUTION

**SC+**

Portable – Easy to Use – Flexible

SC+ is a portable, compact haemodialysis system providing clinical efficacy utilising flow rates typically used on traditional machines.

- Cartridge based, portable system
- Continuous 500 ml/min online bicarbonate dialysate flow, with clearance equivalent to traditional systems
- Easy to use and setup
- Uses conventional consumables
- Flexible therapy regimens
- Allows rapid turn-around time

How it works:

1. Load the single-use disposable cartridge and connect to the dialyser, concentrates and blood lines

2. After automatic priming the system is ready for treatment

3. Disconnect by simply removing the disposables and the machine is immediately ready for the next treatment

4. No need for intensive disinfection or time-consuming cleaning between treatments

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SC+

The SC+ Technology

Innovative fluid management process
SC+’s unique technology incorporates fluid management activities onto a single-use disposable cartridge. The cartridge has a flexible film attached to both external faces, allowing fluids to be manipulated through the application of pressure or vacuum to the film.

Dialysis flow rates of up to 500ml/minute
The cartridge fluid management system enables SC+ to pump, mix and sense fluid flow, thus matching typical usage of larger clinical machines, from a portable unit.

Dialysate fluid generated using reverse osmosis water
SC+ will automatically prepare the dialysate mixture on the cartridge using mains water cleaned by reverse osmosis.

Uses existing, proven dialysers
By using existing dialysers, SC+ will not alter the clinical process. With our system’s virtually unlimited dialysate supply, we will be able to offer a full range of dialysis treatment options in a portable unit.
Health Economics

The management of renal failure is disproportionately costly compared to other medical conditions.

As the number of patients requiring renal replacement therapy (RRT) steadily increases, it is imperative to identify treatments to meet the projected demand that are both clinically beneficial and cost-effective.

The reduced direct cost of home or self-care haemodialysis is influenced by savings in nursing resource and savings in hospital transport. The SC+ also reduces the cost burden to payors and alleviates in-centre capacity constraints.

Market Potential

Quanta’s unique approach to dialysis addresses a large and rapidly growing global dialysis device market worth a total of $13bn currently.

- 2.3 million dialysis patients worldwide in 2012
- Estimated to grow to c. 4 million in 2020
- 23,410 patients alone in UK in 2013

(1) The FHN Trial Group, N Engl J Med 2010. In-Center Hemodialysis Six Times per Week versus Three Times per Week
(2) Ledebo, I; Ronco, C; NDT Plus (2008) 6:403–408. The best dialysis therapy? Results from an international survey among nephrology professionals
(3) Kalorama 2013. Dialysis Equipment and Services Market
(4) UK Renal Registry