

# The RotoProne™ Therapy System Clinical Benefits and Comparative Value

## The RotoProne™ Therapy System

The RotoProne™ Therapy System can be an affordable ICU intervention.

Examples of Common ICU Interventions	Cost Per Day Per Patient	Approximate Length of Treatment	Total Cost of Treatment	Expected Outcome
Surfactant Replacement Therapy	\$10,800/dose <sup>1</sup>	Single Treatment (1 day) <sup>5</sup>	\$10,800	Improve oxygenation
Inhaled Nitric Oxide	\$3,000/dose <sup>2</sup>	Maximum 4 days <sup>2</sup>	\$12,000	Improve blood flow through the lungs
Extracorporeal Membrane Oxygenation and Carbon Dioxide Remover (ECMO/ECDR)	\$6,000/dose <sup>3</sup>	10 days <sup>6</sup>	\$60,000	Survival; improve oxygenation
Xigris	\$1,700/dose <sup>4</sup>	4 days <sup>4</sup>	\$6,800	Survival
Continuous Renal Replacement Therapy (CRRT)	\$550/dose <sup>4</sup>	15 days <sup>4</sup>	\$8,250	Survival
RotoProne™ Therapy System	\$1,295/day	4.4 days	\$5,700	Survival; improve oxygenation

## The RotoProne™ Therapy System Financial Guarantee\*

When your patient is treated with the RotoProne™ Therapy System and no improvement is demonstrated within 96 hours, KCI agrees to share the financial risk specifically related to the cost of the product rental by providing the therapy system placement for that patient at no charge. The guarantee is subject to the following terms and conditions:

- Patient should be placed on the RotoProne™ Therapy System within 24 hours of meeting criteria for ARDS.
- Patient should be rotated at least 40° bilaterally in the prone position for at least 18 hours per day.
- Adherence to all published KCI product instructions for use, operations manuals, protocols, system labels and on-screen guides.
- If the patient shows NO improvement in oxygenation (increased PaO<sub>2</sub>/FiO<sub>2</sub> ratio), blood gases or in chest radiograph within the first 96 hours of treatment, AND the facility notifies KCI prior to discontinuing the therapy, KCI will issue the therapy system placement for that patient at no charge to the institution.

\*RotoProne™ Therapy System Financial Guarantee is subject to compliance with guidance and restrictions listed in KCI's guarantee program and is subject to change at any time without notice. Programs are intended as financial risk-sharing guarantees as they are specifically related to the cost of KCI product rental. KCI makes no representation or warranty as to patient outcomes, healing, incidental or consequential costs associated with patient treatment or hospitalization. Therapy and product indications, contraindications, warnings and precautions must be adhered to. Individual results and circumstances may vary.

## Prone Therapy has been shown to:

- Reduce mortality by 25% when it is initiated early and applied for most of the day ( $p=0.12$ )<sup>7\*</sup>
- Significantly improve arterial oxygenation<sup>8\*</sup>
- Reduce ventilation time by 17%<sup>9\*</sup>
- Reduce ICU length of stay by 26%<sup>9\*</sup>
- Lower VAP incidence in patients with hypoxemic Acute Respiratory Failure<sup>10\*</sup>

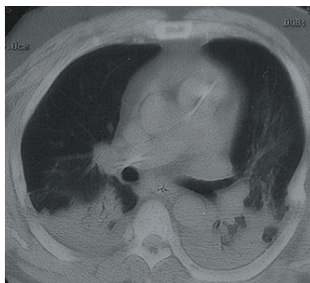
## Potential Risks Associated with Manual Proning

- Patient positioning is labor intensive<sup>11,12,13</sup>
- Can require as many as 4 – 6 caregivers each time a patient is placed prone
- Potential for tube and line entanglement or separation<sup>11,12,13</sup>
- Healthcare staff injuries from patient lifting can result in significant facility costs and missed work days<sup>14,15,16</sup>

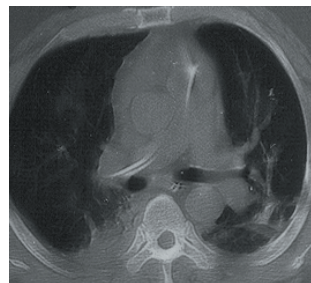
## Automate the Proning Process with the RotoProne™ Therapy System

The RotoProne™ Therapy System is an easier way to deliver multiple intervals of Prone Therapy over an extended period of time.

- Fully automated system can help reduce the number of caregivers needed
- Tube management system secures lines during rotation and movement between supine and prone positions
- Easy to administer and control therapy through an intuitive touch-screen control panel
- Facilitates easier nursing care of severely injured patients



Lungs before RotoProne™ Therapy<sup>17</sup>



Lungs after RotoProne™ Therapy<sup>17</sup>

\*Study utilized manual proning. Results should not be interpreted as device or method specific.

1 [http://www.bristoldirect.com/adobe/dsco\\_8-6-02.pdf](http://www.bristoldirect.com/adobe/dsco_8-6-02.pdf)

2 Smith, I. *RT*. Feb/Mar 2000:69 – 73.

3 Zwischenberger, J.B., Exploring the Frontiers of Severe Respiratory Failure, <http://www.shrinersq.org/research/bluebook2001/frontiers.html>.

4 [http://www.xigris.com/about/cost\\_effectiveness.jsp?reqNavId=3.7](http://www.xigris.com/about/cost_effectiveness.jsp?reqNavId=3.7)

5 <http://newsblaze.com/story/2006033014020100001.pz/topstory.html>

6 <http://www.ich.ucl.ac.uk/factsheets/families/F030174/index.html>

\*7 Mancebo, J., et al. *Am J Respir Crit Care Med*. 2006;173:1233 – 1239.

\*8 Lee, D.L. *Crit Care Med*. 2002;30(7):1446 – 1452. Prone position ventilation induced acute and sustained improvement in oxygenation in many patients with ARDS in a study of 22 patients.

\*9 Watanabe, I., et al. *Crit Care Med*. 2002;30(8):1799 – 1802. A prospective study of 16 lymphadenectomy patients randomized to either prone or supine positioning.

\*10 Guerin, C., et al. *JAMA*. 2004;292(19):2379 – 2387. A prospective study of 791 patients. Overall the study did not demonstrate beneficial outcomes but did raise some safety concerns.

11 Ball, C. *Intensive and Critical Care Nursing*. 2001;15:192 – 203.

12 Rowe, C. *Nursing in Critical Care*. 2004;9:50 – 57.

13 McCormick, J. and Blackwood, B. *Intensive and Critical Care Nursing*. 2001;17:331 – 340.

14 67% of disabling injuries in nursing result from lifting patients. Premier, Preventing Back Injuries in Patient Care, available from <http://premierinc.com>.

15 Nearly 40% of all nurse back injury cases resulted in more than 10 days of missed work. Wiatrowski, W.J., Occupational Injury and Illness: New Recordkeeping Requirements, *Monthly Labor Review*, Dec. 2004.

16 Average costs per healthcare staff-related musculoskeletal injuries per 100,000 work hours are greater than \$160,000. Siddharthan, K., Nelson, A., Weisenborn, G. *Nursing Administration Quarterly*.

17 Stiletto, R.J., Abstract presented at ACCP-Chest Meeting (2001). Full study available at [http://www.med.uni-marburg.de/stpg/ukm/lb/unfallchir/projekte/p\\_intmed\\_1.html](http://www.med.uni-marburg.de/stpg/ukm/lb/unfallchir/projekte/p_intmed_1.html). Study using a non-commercial version of the RotoProne™ Therapy System.

**NOTE:** As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition. Unless otherwise specified, any economic value or savings reported is based on data provided by the facility/clinician and the observations/experience of the clinician involved in the case. Savings are estimates only and specific to the individual case. Savings may not be typical and may vary.

**Caution:** Federal law restricts this device to sale/rental by or on the order of a physician.

**Note:** RotoProne™ Therapy System units have specific indications, contraindications, safety information and instructions for use. Please consult product labeling and instructions for use prior to use.

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