

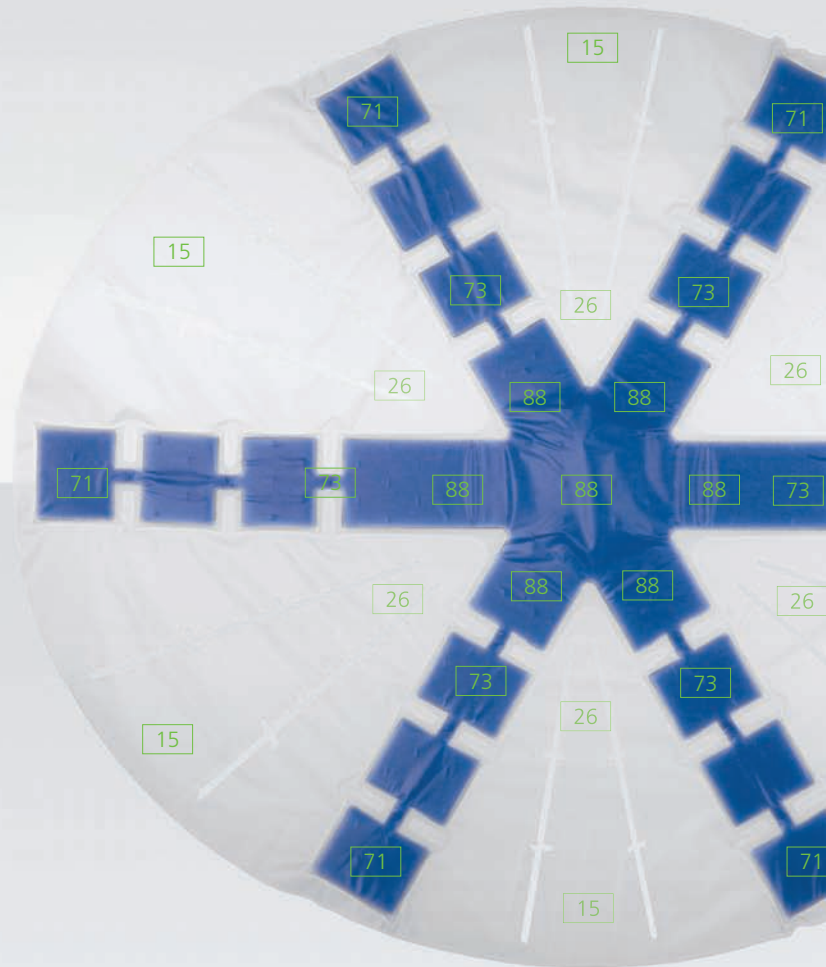
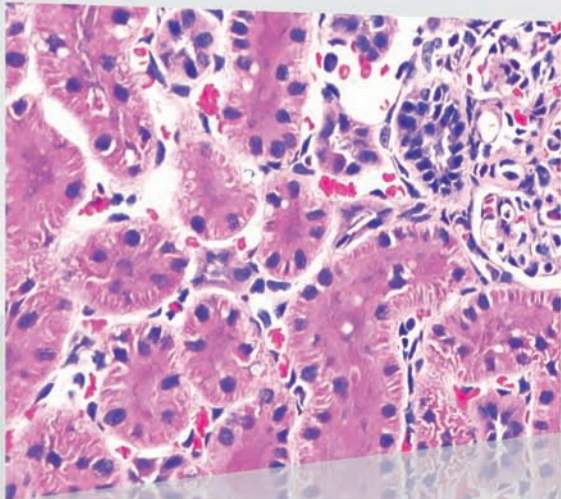


# Faced with the pressure of managing an open abdomen?

Take control early with ABThera™ Open Abdomen Negative Pressure Therapy System.

Summary of pre-clinical studies:

- Inflammatory response
- Comparative pressure manifolding distribution

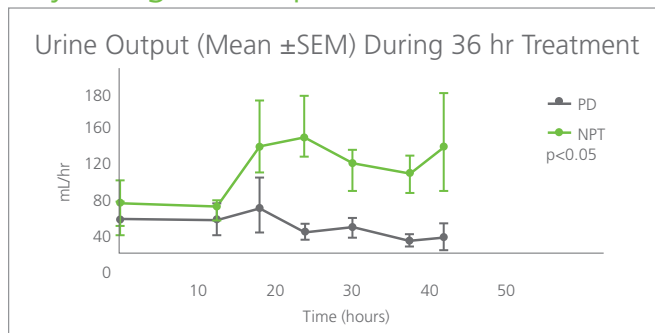


# Early intervention with the KCI Open Abdomen NPT System demonstrated a reduction of inflammatory response \*

In just 36 hours of Negative Pressure Therapy treatment, a pre-clinical study of ischemia reperfusion and septic injury in swine using Negative Pressure Therapy (NPT, n=6) vs passive drainage (PD, n=6) demonstrated:

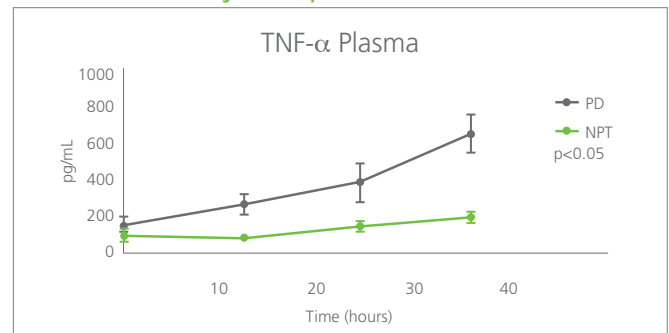
- \* A reduced septic-induced multi-organ dysfunction associated with intra-abdominal hypertension
- \* Systemic reduction in inflammatory response (lowered levels of TNF- $\alpha$  Plasma)
- \* A reduction in extent of injury as shown by histology of intestine and kidney
- \* Improved survival (NPT group 83% [5/6], passive drainage 50% [3/6])

## Physiological Response<sup>1</sup>

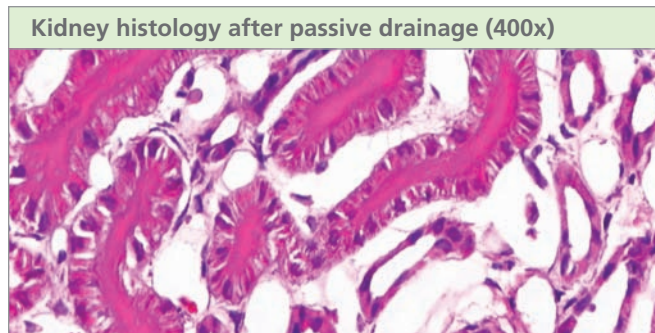


Improved physiological response observed in the kidney.

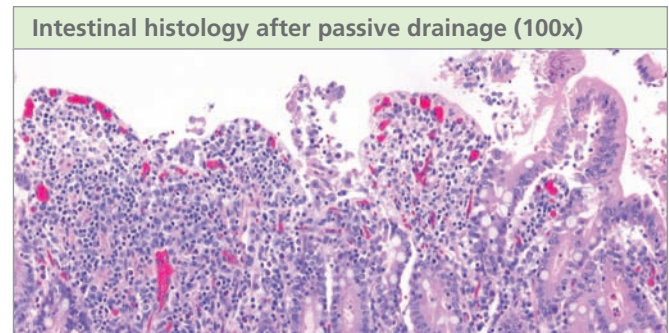
## Inflammatory Response<sup>1</sup>



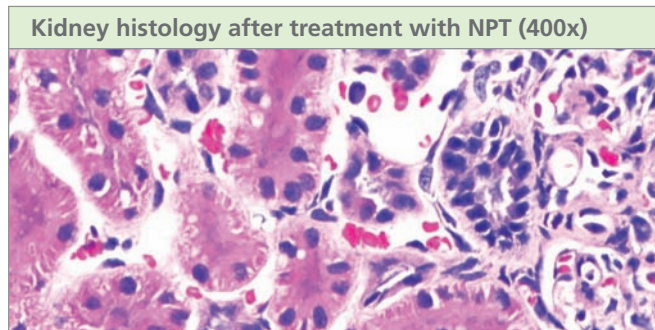
Significant systemic reduction in TNF- $\alpha$  plasma levels was observed.



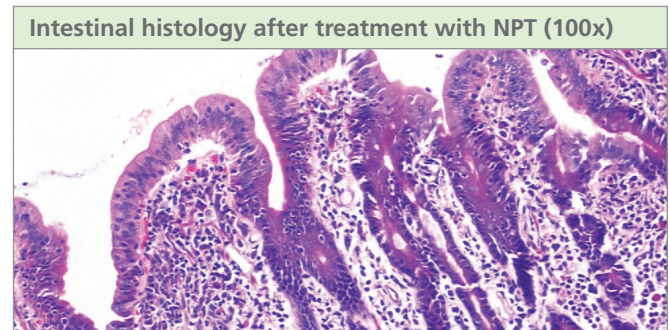
Loss of epithelial barrier, tubular degeneration and noticeable edema present.



Extensive loss of epithelial layer and congested capillaries, indicative of poor drainage (edema) with heavy infiltration of lymphoid cells (inflammatory response).



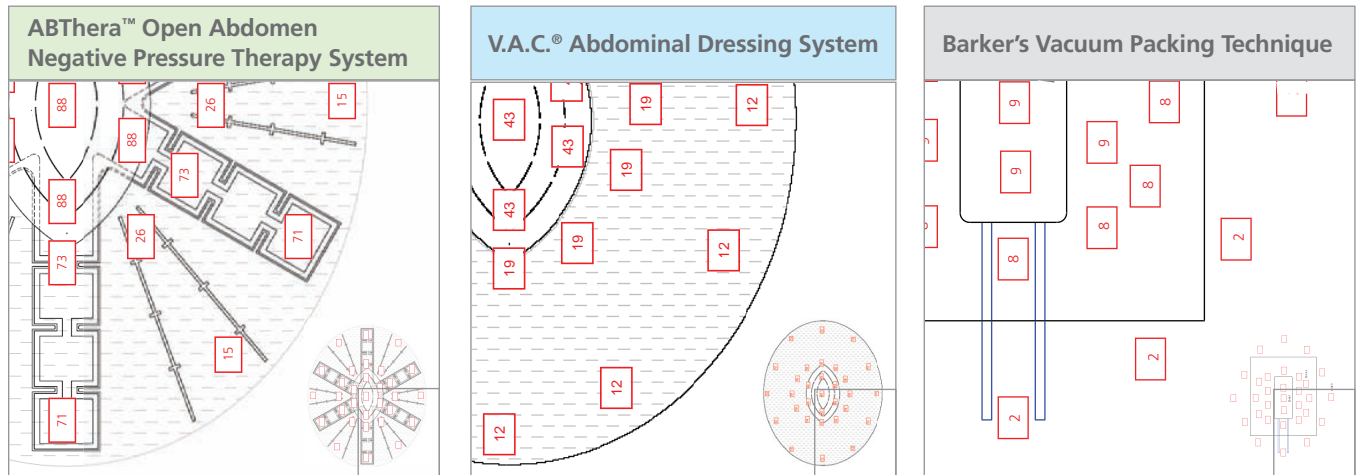
Minimal epithelial barrier damage, less pronounced tubular damage and reduced edema.



No obvious cellular damage to surface epithelium is seen. Minimal edema is noted, along with reduced infiltration of lymphoid cells (inflammatory response).

# And provided rapid and complete fluid removal through enhanced pressure distribution\*

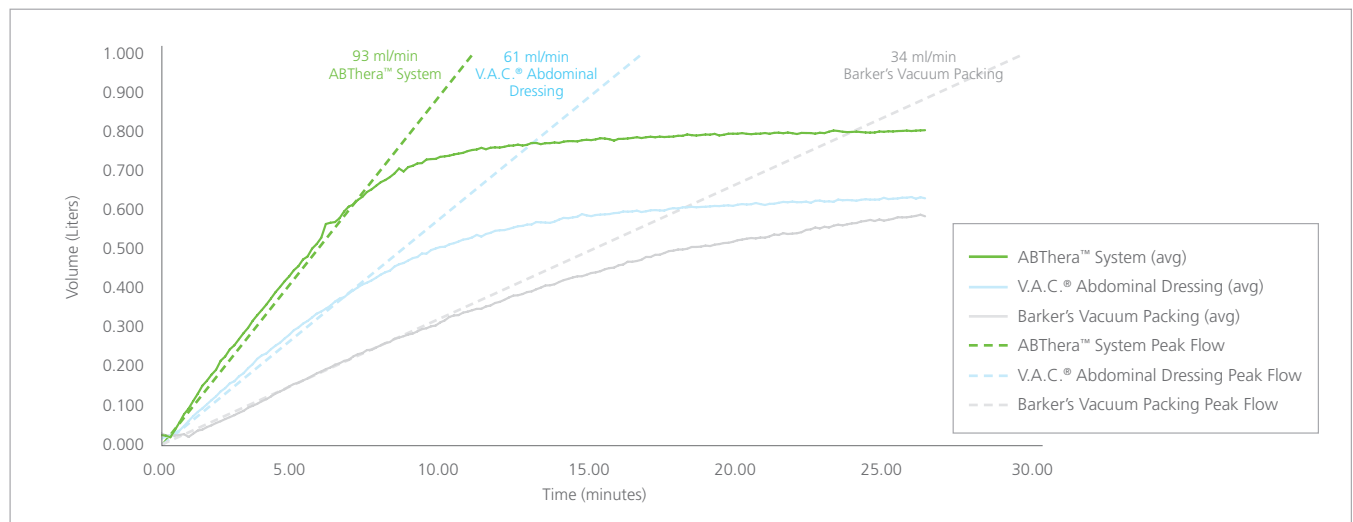
ABThera™ Open Abdomen NPT System provided significantly better negative pressure distribution than other Temporary Abdominal Closure techniques.<sup>2</sup>



Red boxes with number represent location of pressure sensors and measured mmHg.

ABThera™ Open Abdomen NPT System and V.A.C.® Abdominal Dressing System demonstrated significantly higher negative pressure distribution ( $p < 0.05$ ) than Barker's Vacuum Packing Technique during *in vitro* testing.

## Efficient Fluid Removal



ABThera™ Open Abdomen NPT System provided both rapid and complete fluid removal.

\**In vitro* test model designed to simulate OA physical condition – Constant -125mmHg negative pressure applied under dynamic conditions.

# ABThera™ Open Abdomen Negative Pressure Therapy System demonstrated:

- ✳ Improved physiological responses in the kidney and lung<sup>1</sup>
- ✳ A systemic reduction in inflammatory response<sup>1</sup>
- ✳ Optimized pressure distribution<sup>2</sup>
- ✳ Removal of fluid at a higher rate from the open abdomen<sup>2</sup>



## Reference

1. Data on file: KCI ISP07026 DOC 0000021354. Negative pressure group (n=6) treated with V.A.C.® Abdominal Dressing and with a V.A.C.® Therapy System Unit. Control group (passive drainage, n=6) treated with V.A.C.® Abdominal Dressing without negative pressure. V.A.C.® Abdominal Dressing with V.A.C.® Therapy Unit are predicate devices of the ABThera™ Open Abdomen Negative Pressure Therapy System. Therapy initiated at 12 hours after injury for a duration of 36 hours in an ischemia reperfusion and sepsis swine injury model.
2. Sammons A, Delgado A and Cheatham M. *In vitro* pressure manifolding distribution evaluation of ABThera™ Active Abdominal Therapy, V.A.C.® Abdominal Dressing System, and the Barker's Vacuum Packing Technique, conducted under dynamic conditions. Presented at the Clinical Symposium on Advances in Skin and Wound Care, San Antonio, TX, October 22-25, 2009.

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