

**ARJOHUNTLEIGH**

GETINGE GROUP

**SKIN IQ  
MICROCLIMATE MANAGER**

PATIENT CASE STUDIES



...with people in mind

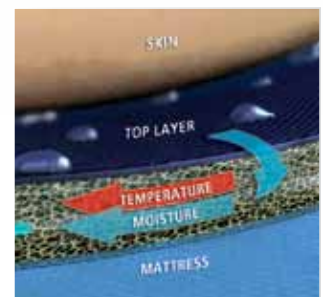


# SKIN IQ MICROCLIMATE MANAGER

The *Skin IQ*® Microclimate Manager (*Skin IQ* MCM) is a water-resistant, vapor-permeable, single-patient-use, mattress cover used over a pressure redistribution mattress to aid in the prevention and treatment of skin breakdown and pressure ulcers (Stages I-IV).

*Skin IQ* MCM is designed to reduce friction and shear, manage the microclimate of the skin at the patient surface, thereby improving skin integrity and patient comfort.<sup>1,2</sup> Powered by Negative Airflow Technology (NAT), *Skin IQ* MCM continually draws moisture away from the skin/mattress interface and helps control skin temperature.<sup>1</sup> It is suitable for use in acute and post-acute facilities as a single patient use device for up to 60 days with patients up to 380 lbs, and for up to 30 days with patient from 380 lbs to 500 lbs.

*Skin IQ* MCM is designed to fit on any pressure redistribution surface that is 80 – 84" (203.2 cm – 213.4 cm) long by 35 – 36" (88.9 cm – 91.44 cm) wide by up to 8" (20.32 cm) high and has a maximum patient weight of 500 lbs (227 kg). *Please refer to Instructions for Use for complete details.*





## CASE STUDY 1

### Patient

Patient was a 78-year-old white male with head and neck cancer who underwent repeated reconstructive surgeries.

### Diagnosis

The patient was admitted for head and neck cancer resection and was on intravenous antibiotics for osteomyelitis of the mandible. Patient also suffered from dysphagia and incontinence.

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM on a pressure redistribution mattress (PRM) at admission and remained on *Skin IQ* MCM for 27 days with follow-up at day 30 (A-D). Paper blue pads were used to allow air flow. A single layer draw sheet was placed on top of the *Skin IQ* MCM to assist when moving the patient. Moisture barrier ointment was also applied twice daily to the area.

### Progress, Discharge and Follow-up

Skin breakdown resolved and patient was discharged.

**Note:** As with any case study, the results and outcomes of the patients in these case studies should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.



A. Initial skin breakdown



C. 27 days post *Skin IQ* MCM



B. 6 days post *Skin IQ* MCM



D. Follow-up at day 30

## CASE STUDY 2



A. Ruptured abscess with skin breakdown



B. Peri-wound condition – 7 days post *Skin IQ*



C. Peri-wound condition – 18 days post *Skin IQ*



D. Peri-wound condition – 20 days post *Skin IQ*

### Patient

Patient was a 48-year-old morbidly obese white female with a recorded hemoglobin A<sub>1c</sub> level of 7.6.

### Diagnosis

The patient had a spontaneous rupture of an abscess located on left buttock (A) and was treated with gentamicin soaks at a previous hospital.

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM on a pressure redistribution surface at admission and remained on *Skin IQ* MCM for 30 days. Additional materials used with *Skin IQ* MCM were paper blue pads underneath the patient and a single draw sheet used for positioning patient. Moisture barrier ointment was also applied twice daily to the area. Ruptured abscess was treated with negative pressure wound therapy. Improved skin condition was noticed around peri-wound area by 20 days of use (B-D).

### Progress, Discharge and Follow-up

Skin breakdown resolved and patient was discharged.

## CASE STUDY 3

### Patient

Patient was a 64-year-old white female with a history of liver cirrhosis, ascites, acute renal failure and severe malnutrition.

### Diagnosis

The patient developed chronic yeast infection to sacrum and buttock areas (A). The patient maintained a Prealbumin (PAB) < 5 throughout hospitalization.

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM, which was installed on a pressure redistribution surface, at admission and remained on *Skin IQ* MCM for approximately 16 days (B-C). Additional materials used with *Skin IQ* MCM were paper blue pads underneath the patient and a single draw sheet used for positioning patient. Moisture barrier ointment was also applied to the area. A physician on call transferred patient onto a low air loss (LAL) surface unaware of *Skin IQ* MCM. Patient remained on LAL surface without *Skin IQ* MCM for less than a week (D), during which the patient's skin integrity worsened. Patient was placed back on *Skin IQ* MCM for approximately 7 days. Skin integrity was improving.



A. Initial skin breakdown



B. 6 days post *Skin IQ* MCM



C. 27 days post *Skin IQ* MCM



D. Follow-up at day 30

### Progress, Discharge and Follow-up

Patient expired after gastrointestinal (GI) bleed within 30 days of admission.



## CASE STUDY 4

### Patient

Patient was a 73-year-old white female with a history of heavy tobacco use, antiphospholipid antibody syndrome, right lower extremity ischemia and malnutrition.

### Diagnosis

The patient underwent revascularization with multiple washouts for hematoma. The patient also had a Candida rash to perirectal, sacral and posterior buttock areas (A).

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM on a pressure redistribution surface 1-2 weeks after admission and remained on *Skin IQ* MCM for 2-3 weeks (B-D). Additional materials used with *Skin IQ* MCM were paper blue pads underneath the patient and a single draw sheet used for positioning patient. Moisture barrier ointment containing an anti-fungal agent was applied to the area pre and post *Skin IQ* MCM implementation.

### Progress, Discharge and Follow-up

Yeast and skin breakdown resolved and patient was discharged. The patient's initial PAB of < 5 improved to 7.5 by time of discharge.



A. Initial skin breakdown



B. 7 days post *Skin IQ*



C. 14 days post *Skin IQ*



D. 17 days post *Skin IQ*

## CASE STUDY 5

### Patient

Patient was an 80-year-old Latin American male with a history of diabetes mellitus, severe peripheral vascular disease and chronic heart failure.

### Diagnosis

The patient had a non-healing left great toe amputation. The hospital course was further complicated by acute renal failure, pleural effusions, and malnutrition.

### Initial Treatment/Application of *Skin IQ MCM*

The patient was placed on a *Skin IQ MCM* pressure redistribution surface, at admission. Additional materials used with *Skin IQ MCM* were paper blue pads underneath the patient and a single draw sheet used for positioning patient. Moisture barrier ointment was applied twice daily to the area. Because of multiple discharges to short-term acute care for respiratory failure and GI bleed, *Skin IQ MCM* was used intermittently for 3 months (A-C).

### Progress, Discharge and Follow-up

Skin breakdown (complications resulting from the toe amputation) resolved and patient was discharged.



A. Initial skin breakdown



B. 5 days post *Skin IQ MCM*



C. 18 days post *Skin IQ MCM*



## CASE STUDY 6

### Patient

A 54-year-old African-American female with human immunodeficiency virus (HIV) presented with a complaint of a clogged tracheostomy.

### Diagnosis

The patient had acute renal insufficiency along with Methicillin-sensitive *Staphylococcus aureus* (MSSA) pneumonia. After tracheostomy, the patient underwent respiratory failure and also suffered from stool incontinence and encephalopathy with skin breakdown (A). Prealbumin levels remained  $<5$  (severe malnutrition) with a C-reactive protein (CRP) level of 1.4.

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM in conjunction with a pressure redistribution mattress (B) and has remained on for two weeks (C). Paper blue pads were used to allow air flow. A single layer draw sheet was placed on top of the *Skin IQ* MCM to assist when moving the patient. Critic-Aid<sup>®</sup> Clear Moisture Barrier Ointment (Coloplast<sup>®</sup>, Minneapolis, MN) was applied twice daily or as needed.

### Progress, Discharge and Follow-up

Skin breakdown resolved and patient was discharged to acute rehabilitation.



A. Initial skin breakdown

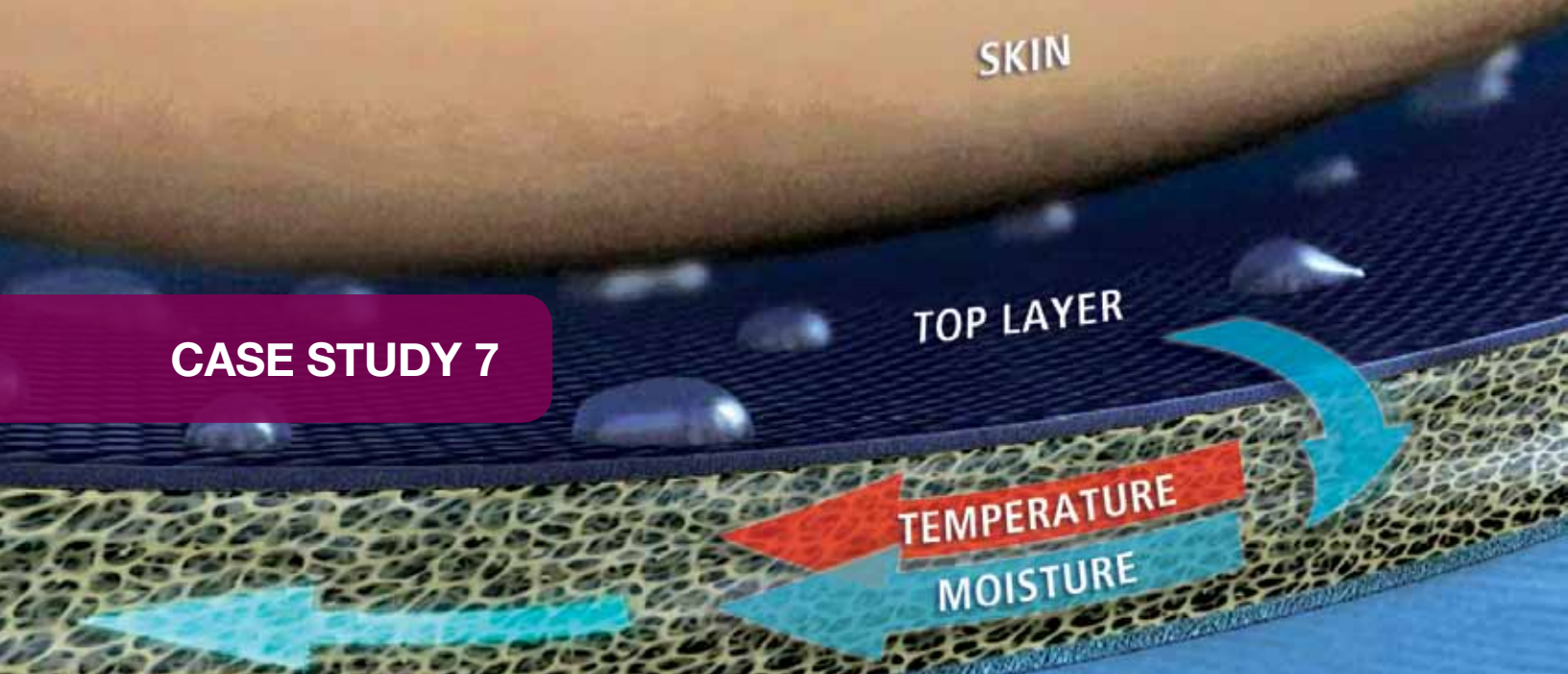


B. 1 week post *Skin IQ* MCM



C. 2 weeks post *Skin IQ* MCM

## CASE STUDY 7



### Patient

A 63-year-old white female patient had a history of multiple abdominal surgeries, including ileostomy and reversal, small bowel obstructions, and lysis of adhesions.

### Diagnosis

The patient was admitted for care of a complex abdominal wound following resection of the necrotic bowel. A subsequent gastric perforation with a jejuna patch was performed. A biological mesh was placed on the open abdominal wound. Patient suffered from chronic diarrhea due to short bowel syndrome with skin breakdown (A).

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM in conjunction with a pressure redistribution mattress (B). Additional materials used with *Skin IQ* MCM were paper blue pads underneath the patient and a single draw sheet used for positioning patient. At the request of patient's family, a zinc-based barrier cream and cornstarch were applied.



A. Initial skin breakdown



B. 11 days post *Skin IQ*



C. 22 days post *Skin IQ*



D. 10 days after discharge

### Progress, Discharge and Follow-up

Skin breakdown resolved after 3 weeks of placement on *Skin IQ* MCM (C) and patient was discharged to a rehabilitation unit. Ten days after *Skin IQ* MCM discontinuation, the patient presented with peri-rectal breakdown (D).



## CASE STUDY 8

### Patient

A 72-year-old white female had a history of congestive heart failure, hypothyroidism, tongue cancer, and renal insufficiency.

### Diagnosis

The patient was admitted for respiratory failure. Patient developed a Candida rash and skin tears (A).

### Initial Treatment/Application of *Skin IQ* MCM

The patient was placed on *Skin IQ* MCM in conjunction with a pressure redistribution mattress (B). Additional materials used with *Skin IQ* MCM were paper blue pads underneath the patient and a single draw sheet used for positioning patient. Critic-Aid® Clear AF Moisture Barrier with Antifungal (Coloplast®, Minneapolis, MN) was applied twice daily and as needed after bowel movements.

### Progress, Discharge and Follow-up

Patient skin breakdown was resolved after 2 weeks on *Skin IQ* MCM (C) and patient was discharged.



A. Initial skin breakdown



B. 1 week post *Skin IQ* MCM



C. 2 weeks post *Skin IQ* MCM

1. ArjoHuntleigh Data on file, *Evaluation of Skin IQ*, Cleveland Clinic, 2011
2. ArjoHuntleigh Data on file, *Evaluation of KCI Overlays*, Cleveland Clinic, 2010

**Case Study courtesy of:**

Jean De Leon, MD, Medical Director, Baylor Specialty Hospital  
Dr. De Leon is a consultant for KCI USA, Inc.

**Note:**

The preceding case studies are from Dr. Jean M. De Leon's individual clinical experience and research.

As with any case study, the results and outcomes of these patients should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

*Skin IQ* Microclimate Manager has specific indications, contraindications, safety information and instructions for use. Please consult product labeling and instructions before use. For instructions, compatibility and safety information specific to the bed mattress/frame, consult product labeling provided by the manufacturer.

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## GETINGE GROUP

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GETINGE GROUP is a leading global provider of products and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. We operate under the three brands of ArjoHuntleigh, GETINGE and MAQUET. **ArjoHuntleigh** focuses on patient mobility and wound management solutions. **GETINGE** provides solutions for infection control within healthcare and contamination prevention within life sciences. **MAQUET** specializes in solutions, therapies and products for surgical interventions, interventional cardiology and intensive care.

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