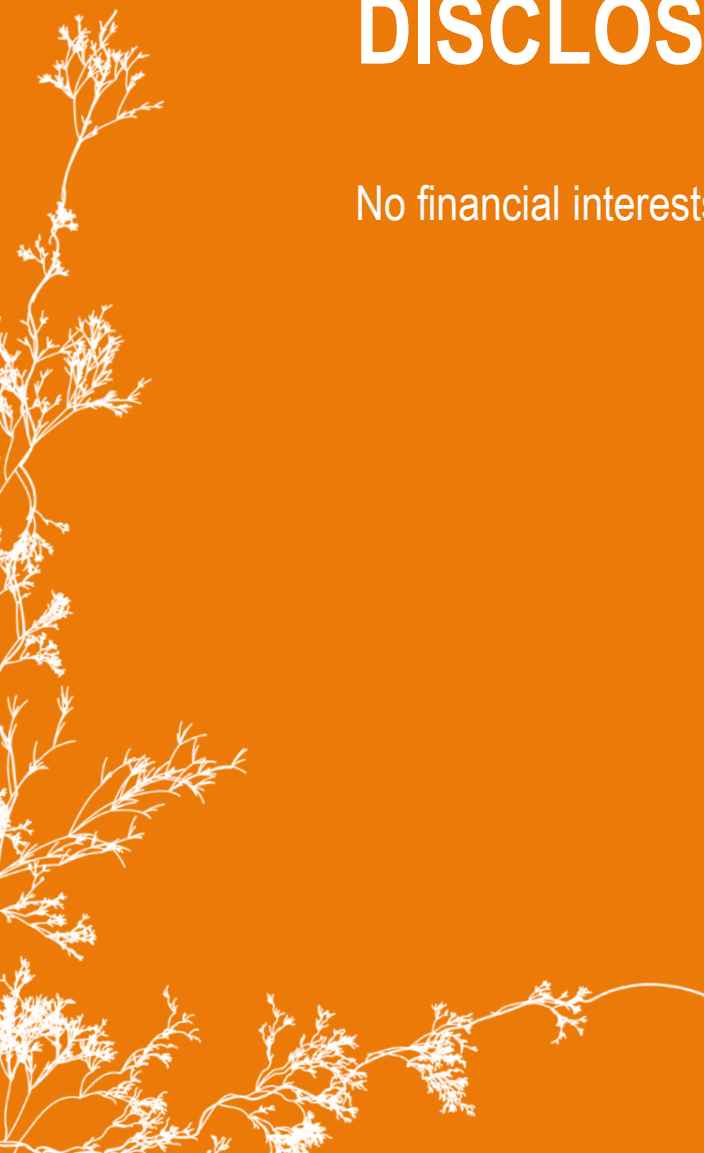


INNOVATION THROUGH COLLABORATION

Charline Kuipers – The Surgical Company
01 November 2023

DISCLOSURE SLIDE

No financial interests



Introduction

Charline Kuipers | 27 | Deventer

- Graduated Biomedical Engineering – University of Twente 2020
- R&D/Business Development – LipoCoat
- R&D Engineer Blood & Fluid Warming – The Surgical Company (since 2022)

The Surgical Company

Patient Temperature Management

- Founded in 1993 – Patient Temperature Management since 2007 (The 37Company)
- HQ in Amersfoort, dedicated production in Almelo
- ~100 employees
- Global distribution in 55 countries
- Global KOL network with doctors and nurses
- Solutions for patient warming

‘Specialization through innovation’



Innovation

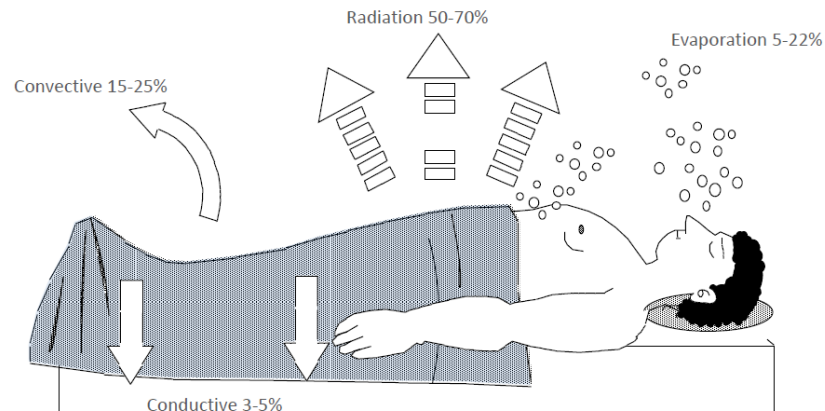
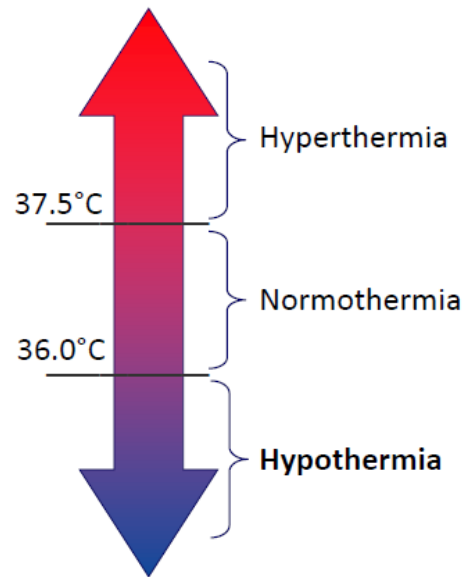
Collaboration with the University of Twente

- Spin-off collaboration since beginning
- Facility use since several years

Patient Temperature Management

Definition and complications

- Core body temperature 36.0 – 37.5 °C
- Changes in core body temperature
- Patient peri-operative heat loss
- IV delivery 'cold' blood and fluids
- Complications



- Discomfort
- Shivering
- Increased infection risk
- Cardiac problems
- Central nervous system
- Increased bleeding time
- Increased mortality

Patient Temperature Management

Our product portfolio – product development



Mistral-Air®

Forced Air Warming



Reflect®

Passive Warming



Fluido®

Blood & Fluid Warming



Fluido® Irrigation

Fluid Warming

Patient Temperature Management

Our product portfolio



Mistral-Air®

Forced Air Warming



Reflect®

Passive Warming



Fluido®

Blood & Fluid Warming



Fluido® Irrigation

Fluid Warming

Innovation – case study

Collaboration with the University of Twente

- Research question: *‘Does the use of thermal heat blankets lead to changes in X-ray image quality?’*
- OR table of a Siemens Artis Pheno Hybrid operating room
- Patient phantom



- Conclusion: Our thermal heat blanket does not lead to a reduced X-ray image quality

Patient Temperature Management

Our product portfolio



Mistral-Air®
Forced Air Warming



Reflect®
Passive Warming



Fluido®
Blood & Fluid Warming

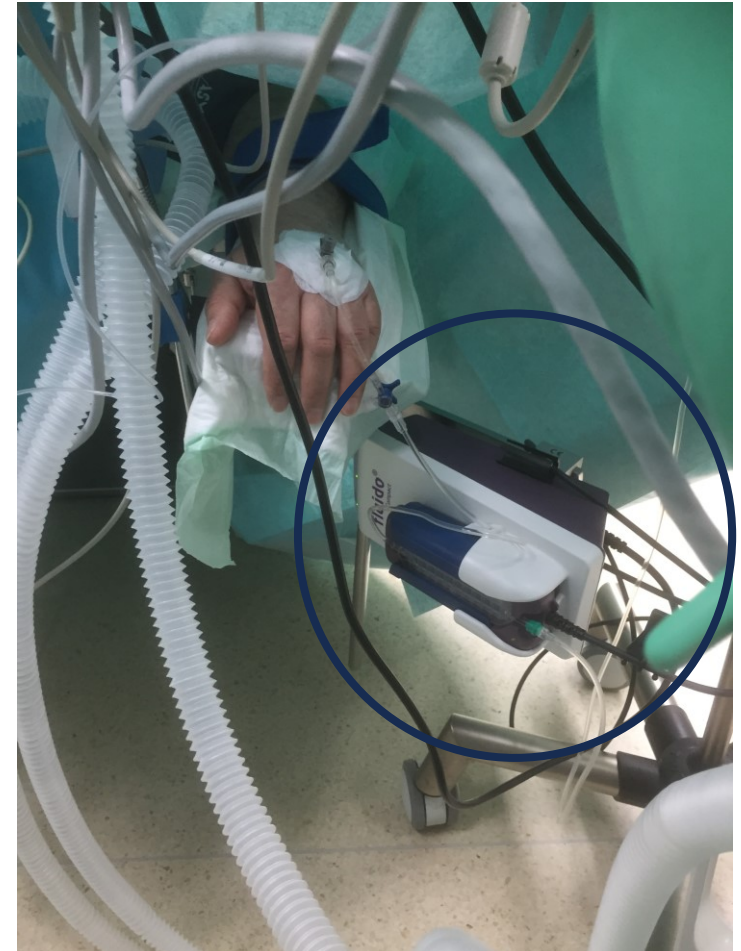


Fluido® Irrigation
Fluid Warming

Innovation – Case study

Usability engineering

- Research objective: *'Usability assessment of the Fluido Compact in the operating room'*
- Improve mounting of the Fluido Compact to be as close to the patient as possible
- Usability testing at UT operating room
- Conclusion: development of a new mount that can be used at the patient bedside



Key takeaways

- Collaboration can speed up innovation
- Facilities help in more effective product development

QUESTIONS?

Contact info: info@tsc-group.com