**The dataset represents data from the study by Ruetzler et al. “Forced-air and a novel patient-warming system (vitalHEAT vH2) comparably maintain normothermia during open abdominal surgery”. *Anesth Analg* 2011; 112: 608-14.**

**Dataset: Normothermia**

Perioperative hypothermia causes adverse outcomes, including impaired drug metabolism, cardiac morbidity, shivering, impaired immune function, coagulopathy, and increased use of hospital resources. Therefore, maintaining perioperative normothermia significantly reduces morbidity and has become routine. Convective (forced-air) warming is by far the most common intraoperative warming strategy. Forced-air warming is relatively inefficient on a per-surface-area basis, but nonetheless transfers considerable heat to the anterior surface of patients because the warm air contacts a large surface area. One difficulty with forced-air warming, though, is that in patients having large procedures, especially in positions other than supine, it may be impossible to warm sufficient surface area to maintain normothermia, defined as a core temperature of 36.0°C. Recently, the vitalHEAT vH2 system was developed that potentially transfers adequate heat through a single extremity using a combination of conductive heat (circulating warm water within soft fluid pads) with mild vacuum, which enhances contact between the heating element and the skin surface.

Preliminary (uncontrolled and unpublished) studies suggest that the device is effective, even in open abdominal surgery. These investigators therefore tested the hypothesis that intraoperative distal esophageal (core) temperatures are not > 0.5°C lower during elective open abdominal surgery under general anesthesia in patients warmed with the warm-water sleeve on 1 arm than with an upper-body forced-air cover.

The study enrolled patients scheduled for elective major open abdominal surgery (liver, pancreas, and colon–rectal surgery) under general anesthesia scheduled to last at least 2 hours at the Cleveland Clinic Main Campus (Cleveland, Ohio) and at the Vienna General Hospital of the Medical University of Vienna (Vienna, Austria). Patients were randomly assigned to vitalHEAT (circulating-water sleeve) (n = 37) or forced-air warming (n = 34). Temperature measurements from 15 minutes after intubation until the end of the case were used for analysis.