

# Near Infrared Imaging

## VEIN-EYE™ Hospital Cart (HC)



Drawing blood or starting an IV can be a very challenging task, even for the skilled medical professional. The Vein-Eye makes this task easier. The technology of the Vein-Eye is especially important in patients who are very young, aged, obese, have dark skin, or their veins have collapsed.

The patented technology of the Vein-Eye provides real-time video of sub-dermal veins located on various parts of the body, particularly the patient's arm or hand. The video displays a “runway” image of the patient’s vein, necessary for IV placements.

The Vein-Eye HC uses harmless near-infrared light to locate veins and display high-quality images on a monitor. There is no radiation and the light source is an array of LEDs.

Everyone who starts IVs or draws blood knows how difficult and frustrating it is to obtain venous access in many patients. Factors such as small vessel size, fragility, skin pigmentation, edema, adipose tissue, and other issues can make venous access challenging to even the most experienced clinician.

There are no tools required for assembly. The Vein-Eye hospital cart is well-constructed portable device that will fit easily into a corner, near a bed, or next to a wheelchair or other medical furniture. The manufacturer is ISO 13485 and 9001 certified.

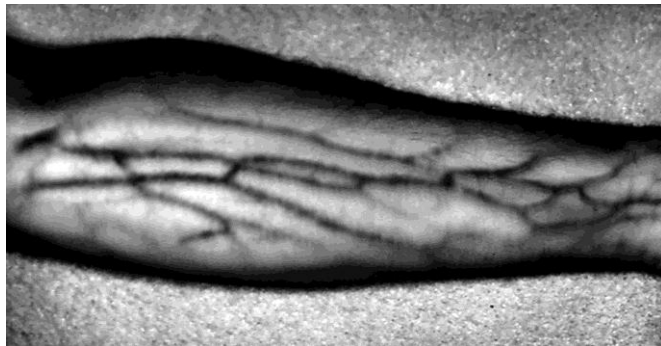
### ***Benefits***

- \*Increase in the number of “first-stick” successes,
- \*Saves time and improves staff efficiency,
- \*Improves patient satisfaction ratings for pain management, one of the HCAHPS survey measures,
- \*Decreases medically-unnecessary PICC lines, reducing cost and infection risk associated with placement and maintenance of central catheters,
- \*Reduces escalation calls,
- \*Decreases the potential for accidental needle sticks.

### ***Advantages***

- \*Affordable
- \*Rapid assessment of all veins due to a large viewing area,
- \*Rapid assessment of all veins due to the ability to zoom in and focus on the best vein segment,
- \*Clear, unobstructed view of the patient by showing veins on a monitor,
- \*Lightweight, easy to transport, and a small footprint for easy access to the patient’s bedside.

**Below is an untouched picture of an arm displayed on the Vein-Eye monitor. The arm belongs to the inventor of the Vein-Eye. The Vein-Eye images can also be displayed on a PC or other PDA device.**



### ***Properly Using the Vein-Eye***

- \*Do not attempt to use the Vein-Eye when the camera or the patient is in direct sunlight.
- \*The camera should be held approximately 10 inches to 18 inches from the patient.
- \*The end user should not adjust the fixed internal camera and monitor settings.**
- \*Please consult the User Manual and Assembly Manual for all warnings and specific directions on the use and assembly.
- \*The camera and monitor are configured at the factory.

### ***Vein-Eye HC Specifications in inches, feet, pounds and Fahrenheit***

- Out-of-the-box operating dimensions: When extended vertically: 62" maximum, 54.6 minimum"
- Weight: 19 pounds
- Width: 18.5"
- In-the-box shipping dimensions: 23" X 23" X 16"
- In-the-box shipping weight: 21 pounds
- Operating temperature in storage or in transport: 39.02°F to 104.9°F
- Operating humidity in storage or in transport: 5.1% to 86% relative humidity, non-condensing
- Power: Electrical power is obtained by connecting to a publicly provided power source by means of the 12V (volt), 2.0A (amps) power adapter and power splitter
- Input: 100-240 V AC, 50/60 Hz, 0.8-4 A
- Near infrared wavelength: 850nm
- Output to camera and monitor: 12V DC, 2.5 A

### ***Vein-Eye HC Certifications and Registrations***

- FDA, Class 1, 510K Exempt (The Vein-Eye was initially called the AVV-1.)
- Conforms to ANSI/AAMI Std ES60601-1
- Certified to CSA Std C22.2 No. 60601-1
- IEC 60601-1-2:2007 / IEC 60601-1-2 (3<sup>rd</sup> edition) – Complete Risk Management File
- Class A for Emissions, Immunity for Non Life-Supporting Equipment
- ANSI/AAMI ES60601-1:2005/A1:2012 Issued: 2012/08/20 Medical electrical equipment – Part 1: General requirements for basic safety and essential performance, Amendment 1
- CSA C22.2#60601-1 Issued: 2008/02/01 Ed:2 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance; COR 2: 2011/06/0
- CE Marking, with Declaration of Conformity, and Tariff Commodity Code: 9006.30 - Schedule B

**For more information about the Vein-Eye HC, please contact NII at [info@nearinfraredimaging.com](mailto:info@nearinfraredimaging.com)**