Shani Biotechnologies Dallas, Texas

A Novel Green Light Oximeter for People of Color

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BACKGROUND

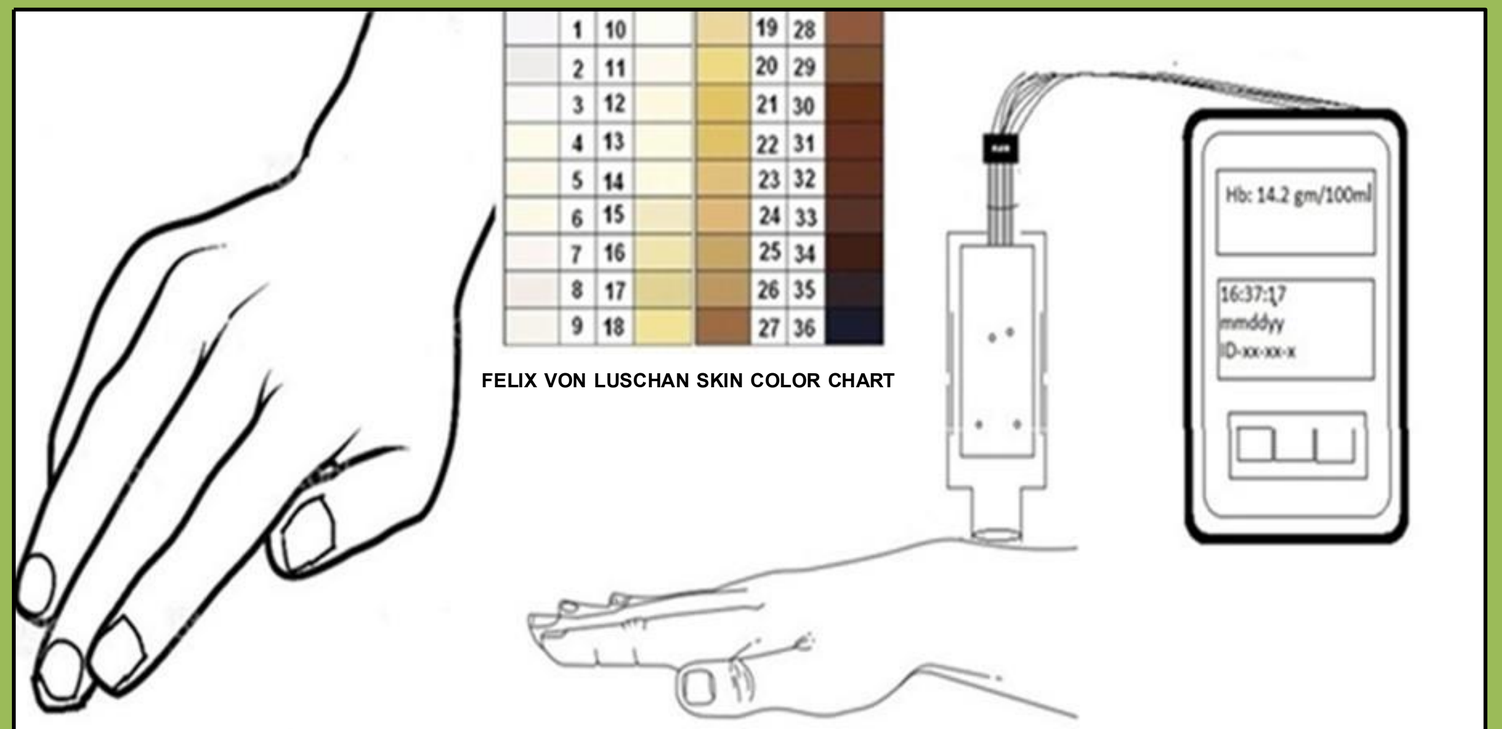
Hemoglobin and Pulse Oximetry monitoring is a common laboratory test in clinical practice. Recent data suggests that commonly used pulse oximeter has questionable accuracy in people of color (1). Inability to detect occult hypoxia by the available oximeters can lead to higher mortality in people of color as evidenced during the recent COVID pandemic (2).

TECHNOLOGY & DEVICE DEVELOPMENT

Available pulse oximeters use red and infrared wavelengths in the light spectrum and there is no correction for the level of skin melanin. This leads to inaccurate readings due to overlapping spectra of light absorption across hemoglobin and melanin. Shani Biotechnologies LLC has developed a patented novel technology using two specific wavelengths of the green light. We have incorporated proprietary algorithm for correction of skin melanin using validated clinical VLS scale (Figure on the right).

CLINICAL DEVELOPMENT PHASE 2 STUDY

We have successfully conducted preclinical and clinical (phase 1) validation of the technology and the device. The data have been published in peer reviewed journals (3). Leadings experts in the field have acknowledged the technology (4). The team is planning a phase 2 study to evaluate accuracy of the device in clinical setting in up to 40 patients admitted to the Intensive Care Unit.



Measurement of skin color using VLS Skin chart

Non-invasive measurement of electrical signal with the new device

REFERENCES

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