

# **Assessing Tissue Perfusion Using Near Infrared Spectroscopy** Following Pulsed Electromagnetic Field Therapy Erica E. Tassone<sup>1</sup>, Nicole L. Jacobsen<sup>1</sup>, Meredith R. Smith<sup>1</sup>, Jonathan A. Niezgoda<sup>2</sup>, Sandeep Gopalakrishnan<sup>2</sup>, Jeffrey A. Niezgoda<sup>2</sup> <sup>1</sup>Regenesis, Scottsdale, AZ; <sup>2</sup>Kent Imaging, Calgary, Canada









over time.

## Healthy Patient

<u>**Case 3:**</u> Healthy 21-year-old female shows slight augmentation in  $S_tO_2$ following a 30 min PEMF treatment. The  $S_tO_2$  increase subsides within 15 min of the end of treatment.

## Conclusions

- treatment in a healthy patient.

### Acknowledgements

This poster is sponsored by Regenesis and Kent Imaging. Work was inspired and supported by the faculty and professional affiliations of the School of Nursing at the University of Wisconsin; Milwaukee, WI

- 1. Sordillo LA et al., J Biomedical Optics, 2014



• NIRS is a novel imaging technique that allows for immediate, non-invasive assessment of tissue oxygenation and perfusion.

• Immediately following PEMF therapy,  $S_tO_2$  and perfusion were enhanced in the lower extremities of healthy and diseased

• Sustained increases in  $S_tO_2$  were observed for up to 120 min after PEMF treatment in a patient with preexisting vascular

•  $S_tO_2$  returned to baseline values within 15 minutes of PEMF

• PEMF therapy is a promising therapeutic strategy for increasing

• There is potential to explore the use of PEMF therapy for treatment of diabetic peripheral neuropathy and chronic

2. Tassone EE et al., J Diabetes Sci Technol, 2023. 3. Niezgoda JA et al., Advances in Skin and Wound Care, 2014. 4. Foley-Nolan D et al., Orthopedics, 1990.