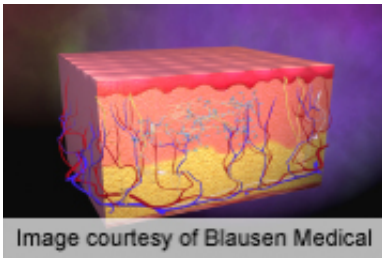


# Imaging device quantifies change in port wine stains

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A newly developed spatial frequency domain imaging device can be used to quantify biochemical compositional changes in port wine stain lesions after laser therapy, according to a study published online Aug. 21 in *Lasers in Surgery and Medicine*.

(HealthDay)—A newly developed spatial frequency domain imaging (SFDI) device can be used to quantify biochemical compositional changes in port wine stain (PWS) lesions after laser therapy, according to a study published online Aug. 21 in *Lasers in Surgery and Medicine*.

Amaan Mazhar, Ph.D., from the University of California in Irvine, and colleagues conducted a [pilot study](#) to investigate the use of a new light emitting diode SFDI device to record biochemical compositional changes in PWS lesions in four subjects who underwent five laser treatment sessions. The SFDI-derived wide-field optical properties and tissue chromophore concentrations were assessed in PWS lesions before and after treatment, and were compared with those of normal skin.

The researchers found that, in all PWS lesions, before treatment, elevated oxy-hemoglobin and tissue [oxygen saturation](#) were observed. In all PWS lesions, laser treatment correlated with a more than 100 percent increase in deoxyhemoglobin, a more than 10 percent decrease in tissue oxygen saturation, and a more than 15 percent decrease in scattering. For the one patient who underwent two consecutive laser treatments, there was a 45 percent decrease in dermal blood volume.

"SFDI is a rapid non-contact wide-field [optical technique](#) that shows potential as an imaging device that can be used to quantify biochemical compositional changes in PWS after [laser therapy](#)," the authors conclude.

Two authors are cofounders of Modulated Imaging Inc., which developed the spatial frequency domain imaging device used in the study.

**More information:** [Abstract](#)  
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