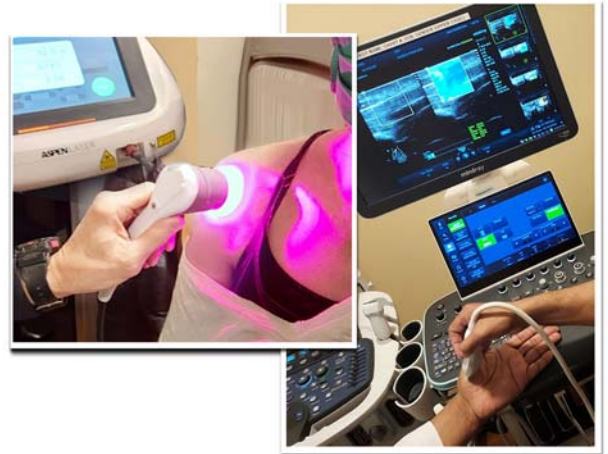


Friday, March 17, 2023

DEMO DAY WITH ASPEN LASER - PHOTOBIO-MODULATION THERAPY

IPHA NEWS and HEALTH TECH REPORTER covers DEMO DAY at the Bard Diagnostic Imaging Center in NYC @ March 7, 2023. National clinical trainer Mark Murdoch speaks in an interview about the Aspen Laser technology while he treats registered patients suffering from various chronic disorders (including a rotator cuff tear & other MSK joint injuries, psoriatic arthritis and psoriasis on the skin).



PART 1: PILOT STUDY- “SCAN AND TREAT PROTOCOL”

May 4, 2023 – A comprehensive 30-90 day test drive (also known as the PHASE ONE pilot study) of the ASPEN LASER APEX Model was conducted at the Bard Diagnostic Imaging & Research Lab. The test drive was coordinated in part by the academic publishing and research administrators of the Integrative Pain Healers Alliance (IPHA). Defined as an anecdotal test drive and report, this expanded product review was an academic collaborative exercise spearheaded by DR. ROBERT L. BARD- diagnostic imaging specialist and Senior Research Advisor to HealthTech Reporter (performance review) projects.



Dr. Bard (a seasoned radiologist) supports the implementation of quantitative imaging as a key platform for reporting on the physiological effects induced by health technologies such as the APEX Laser model. **Efficacy reports of this pilot study are in its final stages and shall be submitted for publishing by fall of 2023.**

TECH UNDER REVIEW- THE NEAR INFRARED LASER THERAPY

Transcript by Mark Murdock

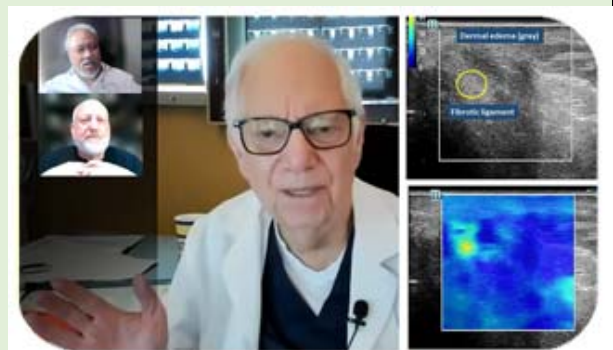
Photobiomodulation is what we're actually doing when we look at red and near infrared light. (it's different from far infrared-that's a sauna creating deep heating in the tissue and sweating out toxins). Photobiomodulation is the application of red and near infrared light to tissue where there is disease or dysfunction. The mechanism of action of light is very simple. It doesn't treat any specific disease or diagnosis, but it treats the underlying cause of all dysfunction in the body (all disease) and that is cellular health and wellness.

Within the cell, oxygen is supposed to flow into the mitochondria, which is the powerhouse of the cell, and that's supposed to produce adenosine triphosphate or ATP. This is what every cell in the body uses for energy. Due to exposure to via environmental toxins, lack of sleep, stress, injury and disease, lack of exercise, too much exercise, not enough sunlight, poor nutrition etc. oxygen flows in the cell and then it's bound by nitric oxide. That binding of nitric oxide with oxygen forms a deadly particle called a free radical. This causes two problems: #1- that oxygen is now not free to go into the mitochondria- so our ATP production in the body drops. #2- there's the abundance of free radicals is the root of every disease. It's the gene expression for things like cancer, heart disease and diabetes. So what light does very simply is when we shine light in and we can get light into the cell at the right wavelength, dosage and power density, it simply unbinds the oxygen particle and the nitric oxide particle and the free radical is dissipated into the blood vessel walls. So now we have removed free radicals and inflammation inside the cell.



FROM THE RESEARCH TEAM

When we first started the test drive series of the Aspen Laser, we explored a number of diagnostic strategies to capture measurable progress of its treatment. Through our volunteers, we recorded a pattern of common disorders in line with chronic inflammation or traumatic injuries – the kind that real-time ultrasound is trusted to track and monitor either via 3D Doppler (blood flow) or Elastography. (1) The visual evidence provided by clinical imaging offers quantifiable reporting of the injury to assess the true nature of that pathology prior to inducing care. (2) For research applications, using the primary scan as a BASE LINE and then applying a POST-TREATMENT scan could provide a compelling and comparative study of the patient's immediate reaction to the treatment, thus providing anecdotal proof of the therapy's progress. (3) Repeating this process of "Scan-Treat-Scan" with a larger set of monitored volunteers may provide for an official Clinical Validation Study of the therapy. (4) As an aftermath, surveying a PATIENT NARRATIVE provides both an overview of the injury and a testimonial of the treatment process. This report comports with our visual scans and the conclusive analyses of the data collected by the scanning devices. – Dr. Robert L. Bard

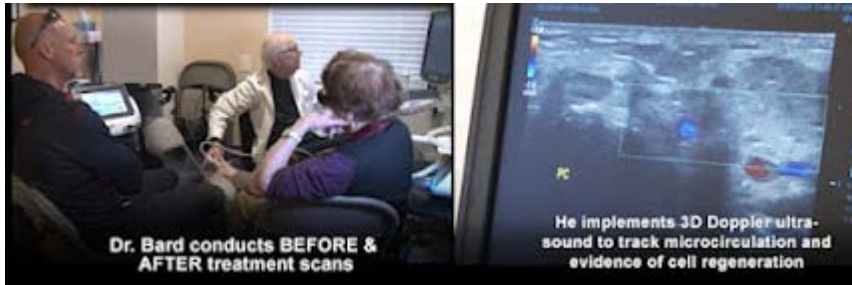


PART 2: IMAGING ANALYSIS OF ULTRASOUND TECHNOLOGY

Subjective survey questions like “how do you feel?” or “where does it hurt?” can only offer a starting point to the detective work of diagnostic care. Meanwhile, use of medical imaging solutions such as the ULTRASOUND, gives us that objective and quantifiable data that we need to monitor therapeutic progress and measure the current state of a patient’s pathology. Acquiring this form of data says, “this is where you were, this is where the treatment is, and this is where you are now!”



Imaging gives the patient confidence to continue the care knowing that our treatment is actually helping and that it's moving forward. To know that it's not just psychosomatic, but they see data and what gets monitored and tracked and gets repeated. So that makes for a more compliant patient and then gets us a faster and better result.



Use of real-time monitoring through non-invasive innovations allow therapists to track the pre and post sessions as far as what's happening in in the tissue and what's happening with blood flow. We look at the imaging under the skin surface that normally people wouldn't be able to see. By this, we can track different things with light therapy,

but on the average, most response happens over time. We don't have to wait till their next visit to identify response. We can adjust our treatment midflight- and change the components on the laser thanks to the immediate feedback from image guidance-- not just from the patient.



QUANTITATIVE IMAGING CONFIRMS THERAPEUTIC RESPONSE

By: Dr. Robert L. Bard

One of the most comprehensive ways to confirm the results of any treatment is by clinically tracking the body's physiological response from underneath the skin. Diagnostic imaging captures measurable data about the injured or inflamed area, allowing both clinicians and patients the ability to identify therapeutic progress in real time. Widely preferred scanning modalities include the Doppler Blood Flow Ultrasound (or sonography) and Elastography, both using high-frequency sound waves to view inside the body. Like an internal video camera, these high speed scanning innovations capture actual movement of the body's internal organs. This offers a vast amount of biometric information about the patient’s condition, in comparison to still images of conventional x-rays. The ultrasound's ability to evaluate abnormalities within the soft tissue in research and clinical trials are widely used in recording evidence-based biomarkers to trace therapeutic efficacy.

