MINDRAY™ SAMPLE DATA - DIAGNOSTIC REPORTS

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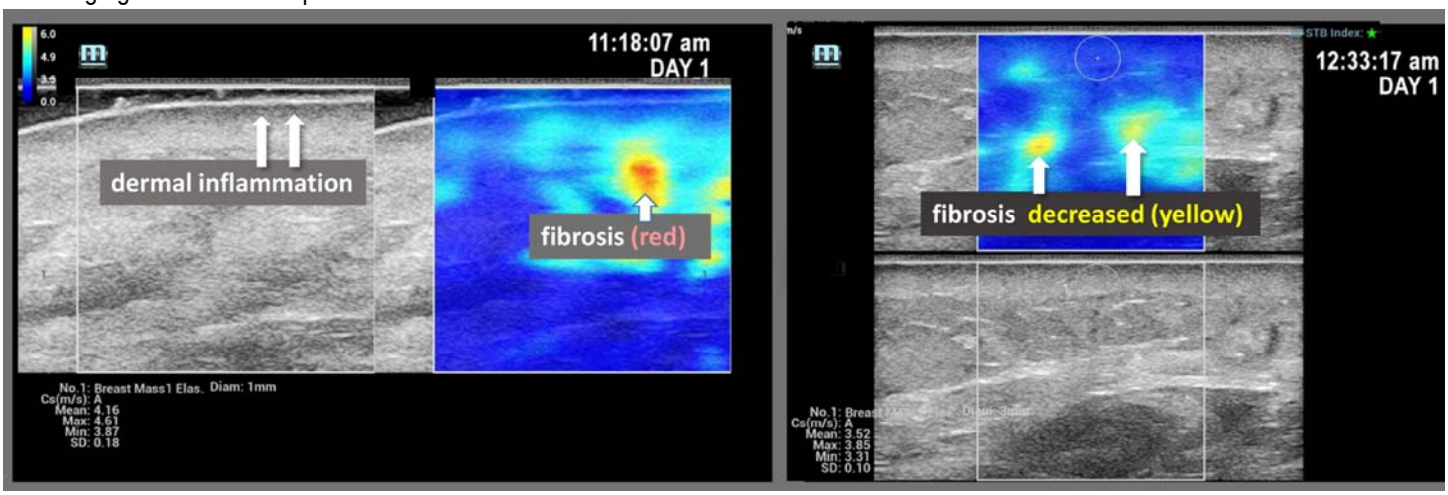
CASE 1: (Mal): Lymphedema/ R Arm

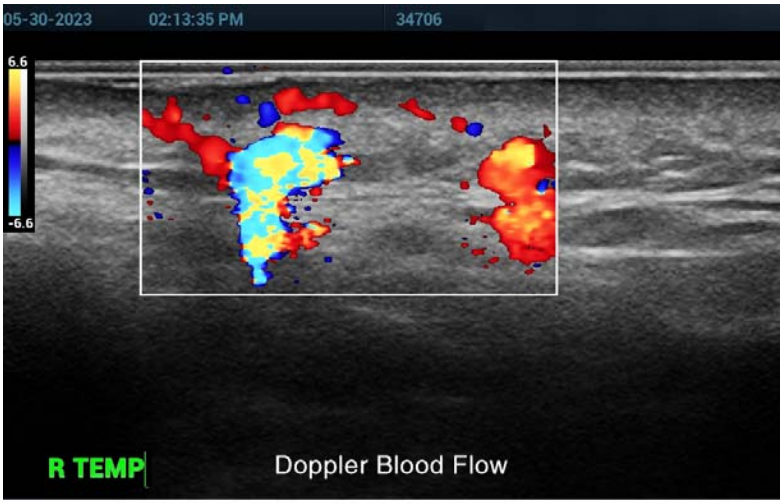
(INITIAL NOTES from 6/21) Lymphedema in the right arm from breast cancer surgery. The patient expressed that lymph node was not painful, but that the arm felt heavy. A scan from the elbow down to the wrist indicated massive subcutaneous edema. Epidermal thickening from 0.2 millimeters to 0.9 millimeters, epidermal thickening, dermal edema from 1mm to 2mm, and the subcutaneous tissue was bulging and firm and expanded to 12mm when the normal side was three millimeters.

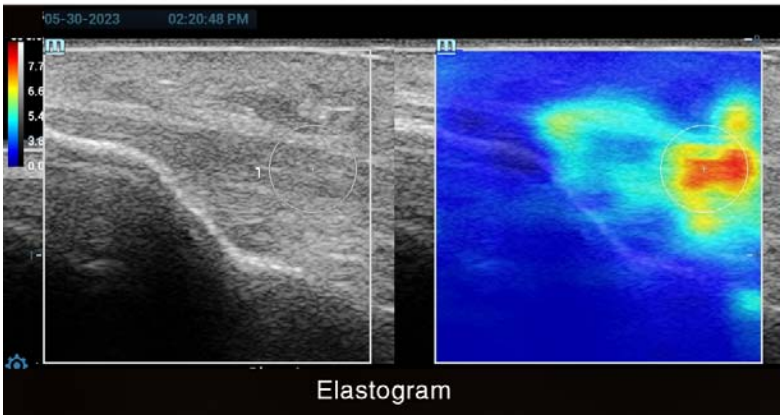


CASE 2: (Fabr) Rheumatoid Arthritis/ Knee / Tendinopathy

PHYSICIAN'S REPORT: Inflammatory disease involves the skin, joints, tendons, arteries and many solid organ systems. Top image of the temporal area to measure arterial and autonomic nervous system response to the energy input shows that the upper 1mm of the 2 mm dermis is dark (arrow) and the inflamed area has measurable inflammatory vessels (double arrow)

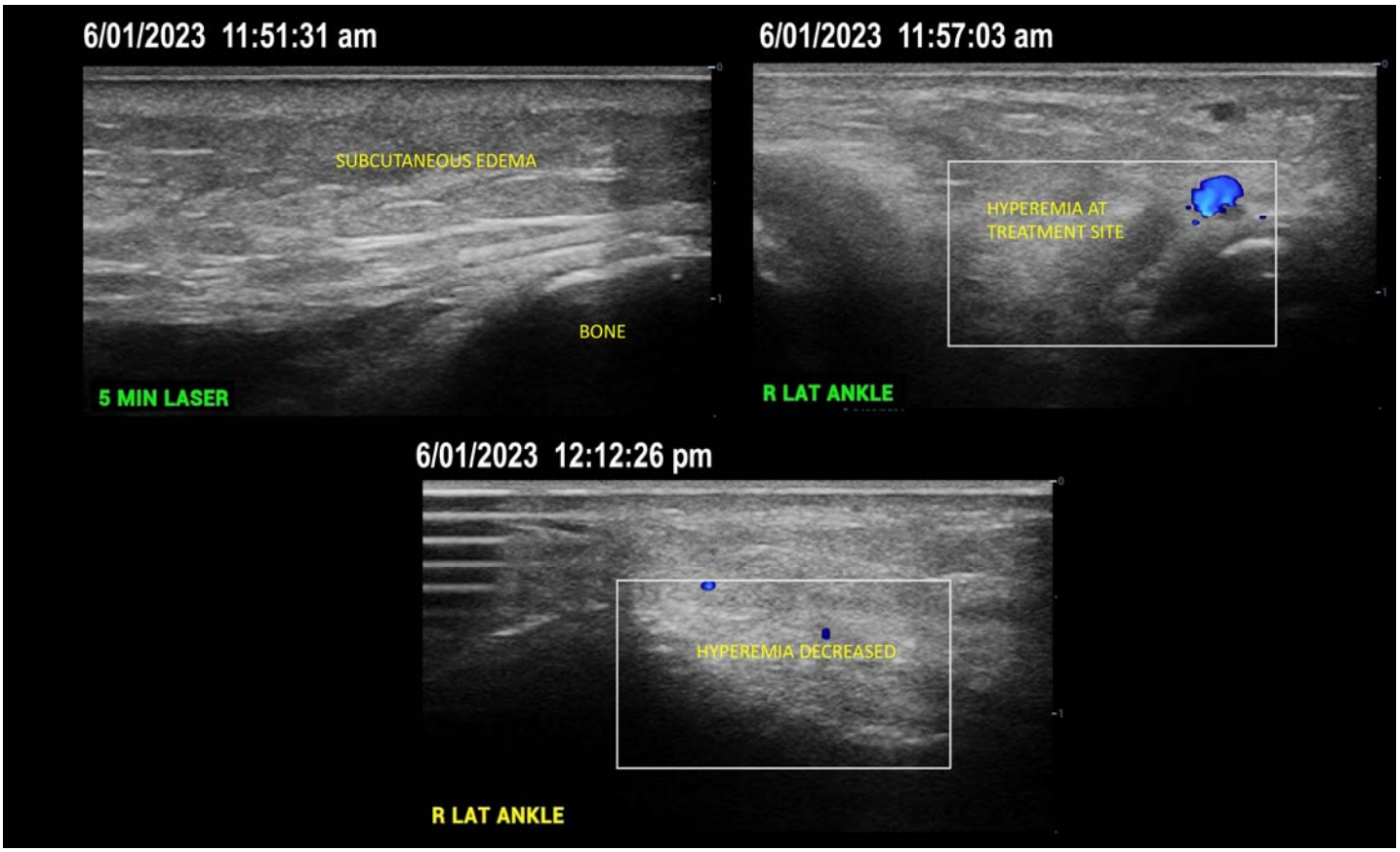
Bottom image of the patella and patellar tendon demonstrates widening of the mid tendon (yellow arrow) and elastographic confirmation of early fibrosis in the orange (color scale in elastogram: blue=soft, red=hard) Early detection of inflammatory disease allows for prompt treatment to avoid disabling chronicity. Since many diseased areas of tendons (tedinopathy) are asymptomatic until a minor stress ruptures the structure requiring corrective surgery as is the case of non professional athletes.





CASE 3 (Pel): Edema / Patella

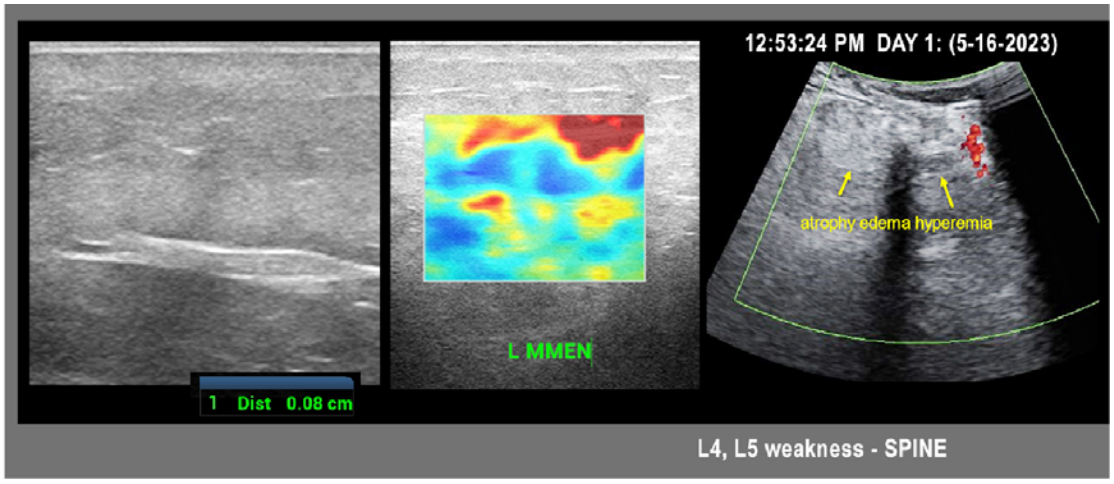
PHYSICIAN'S NARRATIVE: Subject indicated traumatic injury with swelling of the patella and media left knee. Initial scans of the subject also indicated EDEMA was (also) eight millimeters and reduced the five millimeters of following treatment. This reduction in size reflected as progress from same day as treatment. Additional swelling and pain is also reported on right ankle and foot concurrent to the same injury. Patient expressed significant positive results. Use of the 3D Doppler Blood Flow ultrasound was the chosen scanner for this case to identify edema.

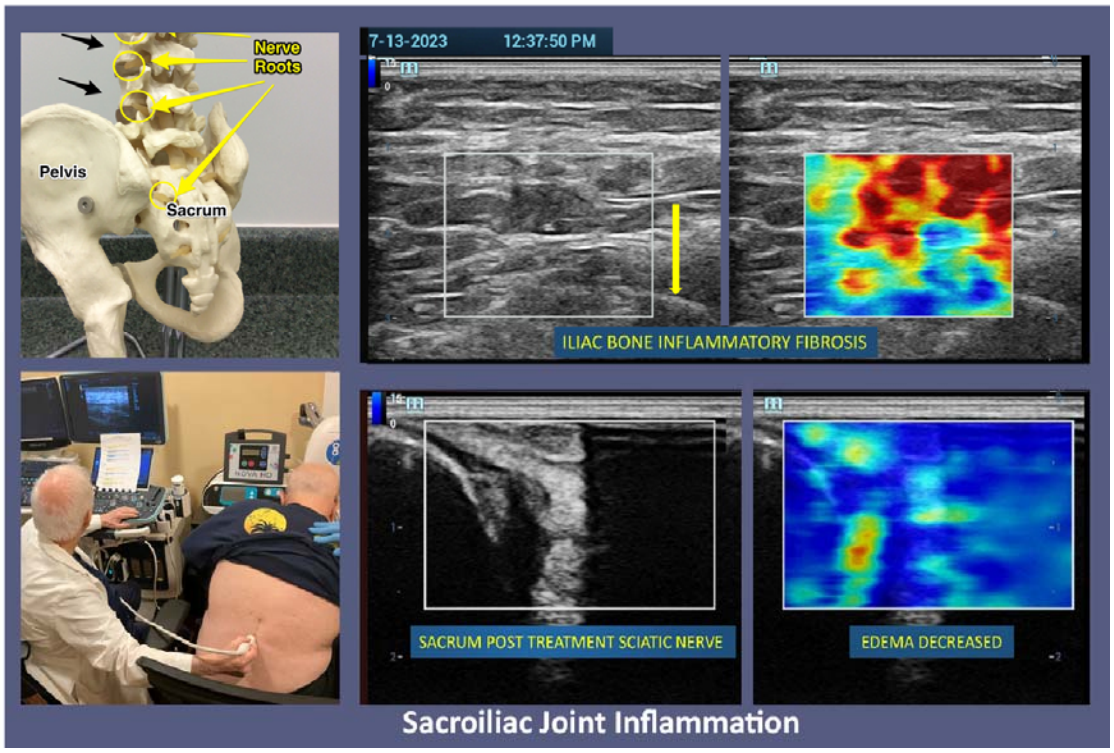


CASE 4 (Sig) – Sacroilliac Joint Inflammation (5/16 - 7/14)

Hx: back pain comparison 5/23 LE DOPPLER SPECTRAL: Vascular area: left SI joint | Triphasic waveforms Peak vel 7cm/s.

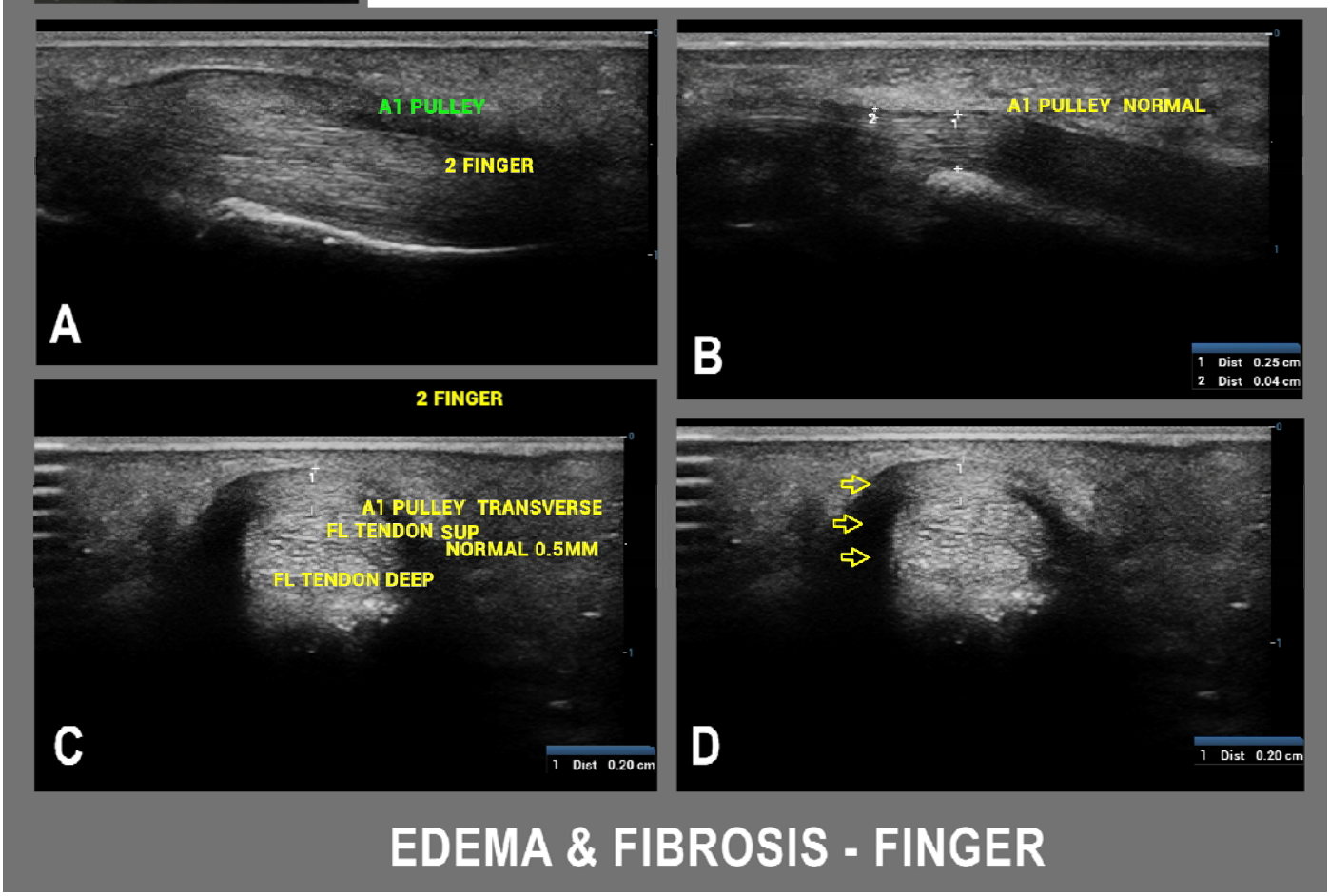
ELASTOGRAPHY: Sacroiliac joint red area reduced 90%. IMPRESSION: Dermal fibrosis decreased in midline. - L sacroiliac inflammation reduced on elastography - Mild plaque R femoral artery with normal flow Doppler: L4, L5 weakness – SPINE: Ultrasound probe is placed over the sacrum and the oval mass (ref: bright and echogenic is the atrophy and scarring of the muscle). The black area in the middle is the normal shadow cast by the bone of the spine. The spine is processed that blocks the sound from passing. And on the left, the inflammatory hyperemia of the muscle is visible possibly indicating the overcompensating for the weak right side.





CASE 5: Edema & Fibrosis - Finger

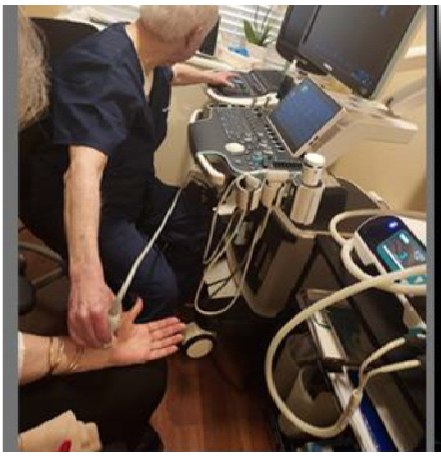
Image A shows the top white line of the skin surface with the 0.2mm black line of the epidermis. It is followed by a white area called the A1 Pulley, w/c is a 0.5mm structure normally. Tissue has enlarged to twice the size and bright with echoes of fibrosis. The curved bright white structure is the bone of the under surface of the second finger, and the two tendons, the two plexor tendons are seen below where it says two finger. Slide B: after treatment, shows the edema at the A one pulley to have gone away completely.

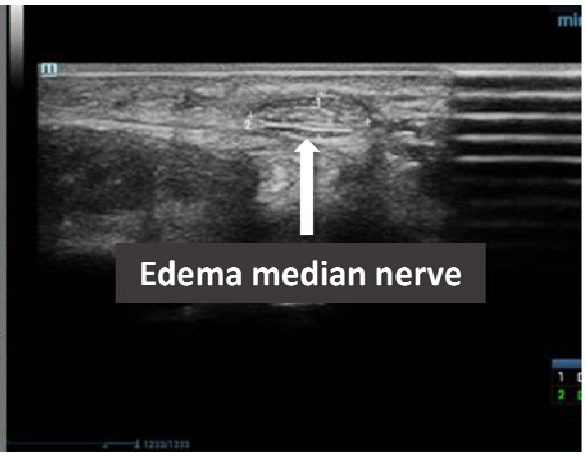


CASE 6 (Sul): Edema / Hand

5-23-2023 1:53:23pm

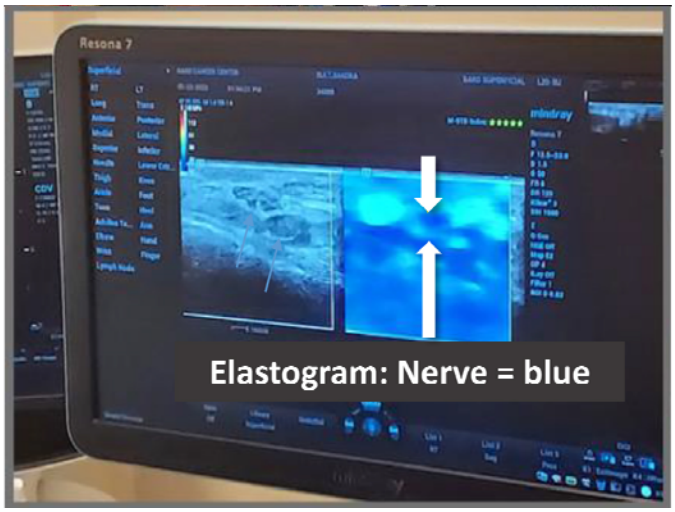
Patient presented evidence of edema on both hands/wrists after impact. Therapy occurred on left hand only and is scanned with Doppler Blood Flow and Elastography to identify edema in median nerve.





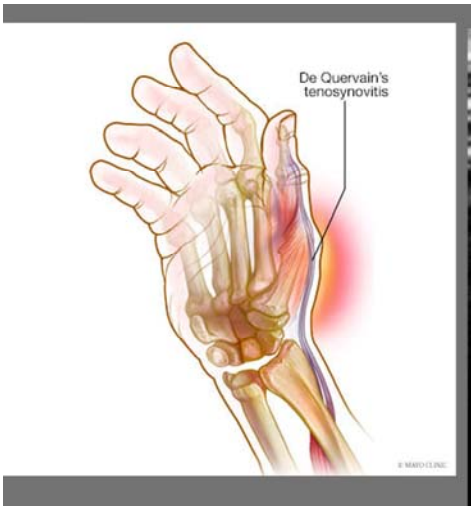
PATIENT NARRATIVE

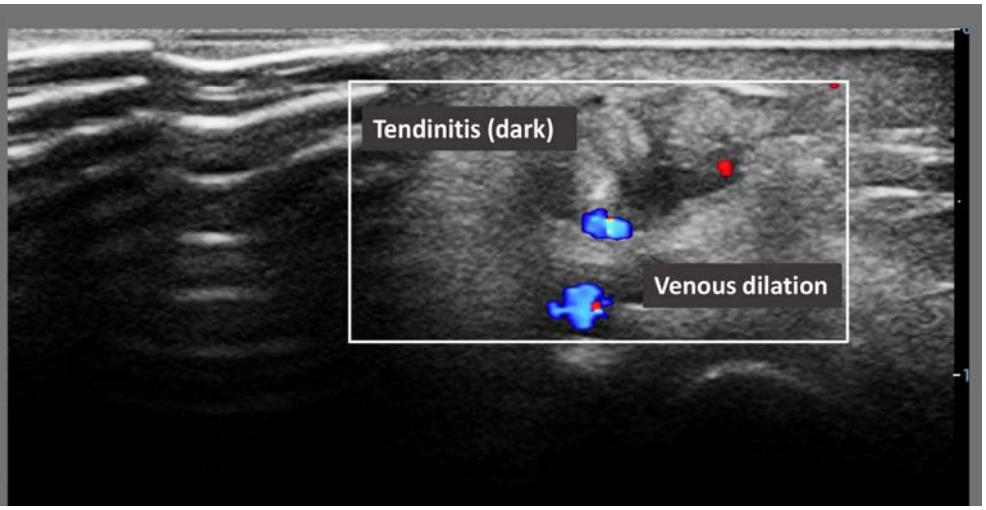
Around 5-9, I fell down a flight of stairs and landed on my hands causing major bruising and significant inflamed swelling on both. I used ice on it frequently + 600mg ibuprofen and counted on nature to make it go away. On 5/23, I experienced a 15 minute treatment on my left hand only. I would say like right away I noticed a difference. I had more flexibility in my wrist right away. It just continued to get better and better (from the treatment). I was able to sleep through the first night without any pain when I rolled over on my hand. The next day, the purple began to fade and it started to turn yellow- indicating recovery. The other hand (untreated) was still purple. It was interesting to see the comparison and that the hand that was treated was the worst hand. I could see the recovery on the spot! And by the second or third day, it was completely gone- and the other hand was still purple. As an athlete, I'm no stranger to bruises and bumps from things like falling off a bicycle. My one experience with this laser therapy was the fastest recovery...I would say by double, if not triple, because the purple started going away right away.



CASE 7 (Usl): Arthritis

PHYSICIAN'S NARRATIVE: Patient with longstanding rheumatoid arthritis and a swollen thumb was scanned with fluid in the extensor pollicis longus and brevis tendons with US Doppler blood flow indicating inflammation in the synovia. Subject expressed diminished pain after treatment, also demonstrating increased flexibility of thumb.

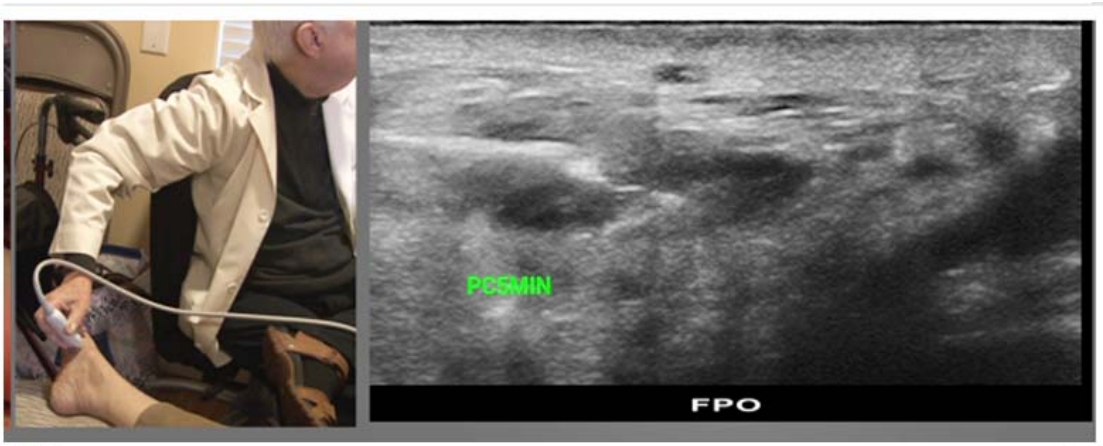




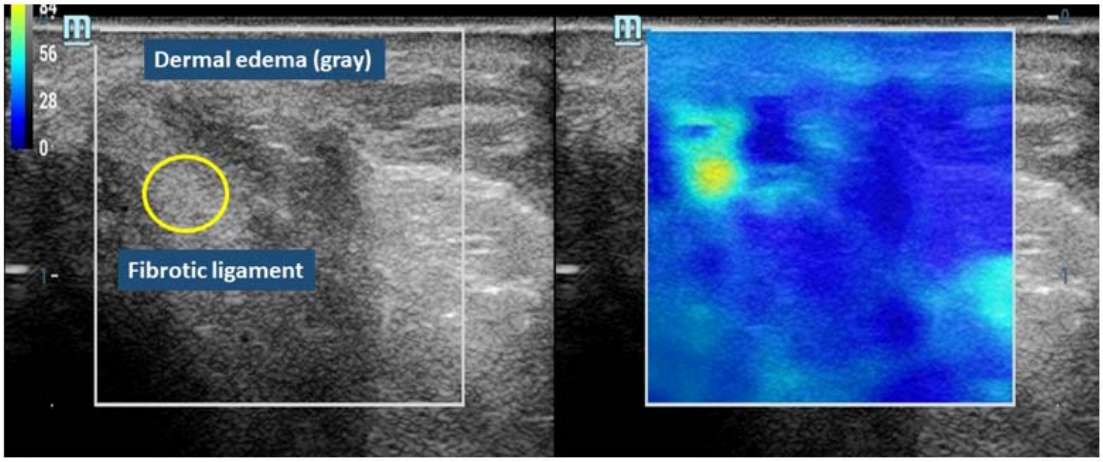
CASE 8 (Loi): Psoriasis (Foot/Elbow)

FOOT: laser compare 3-11-23. Hx: Right foot pain Sonofluoroscopy of the plantar and hallux tissues was performed in multiple scan planes with 18 and 20 MHz transducer frequencies. Power and spectral Doppler was performed. Mild tendinitis unchanged.

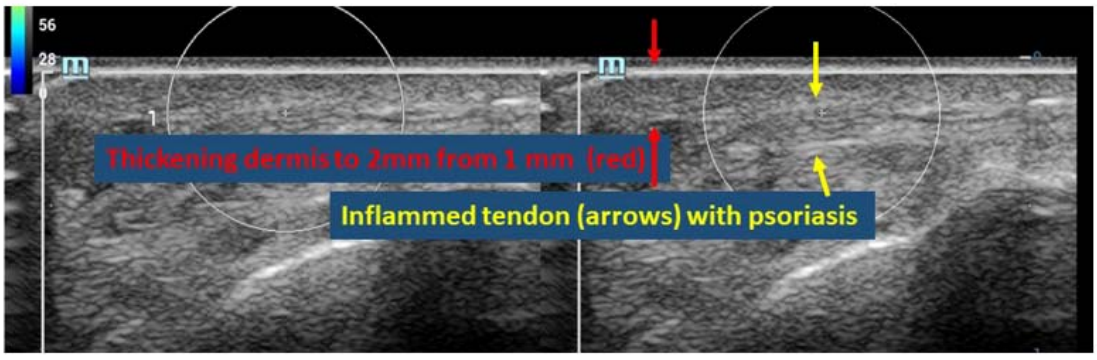
LE DOPPLER: Normal posterior tibial and pedal arterial Doppler flows. No regional hyperemia. Triphasic waveforms. Peak vel 11cm/s. Hyperemia decreased to the dip joint. 3D shows abnormal dermis decreased from 2.1mm to 15mm.



ELASTOGRAM: Decreased edema psoriatic plaque (light blue) with early fibrosis of talar ligament (yellow).



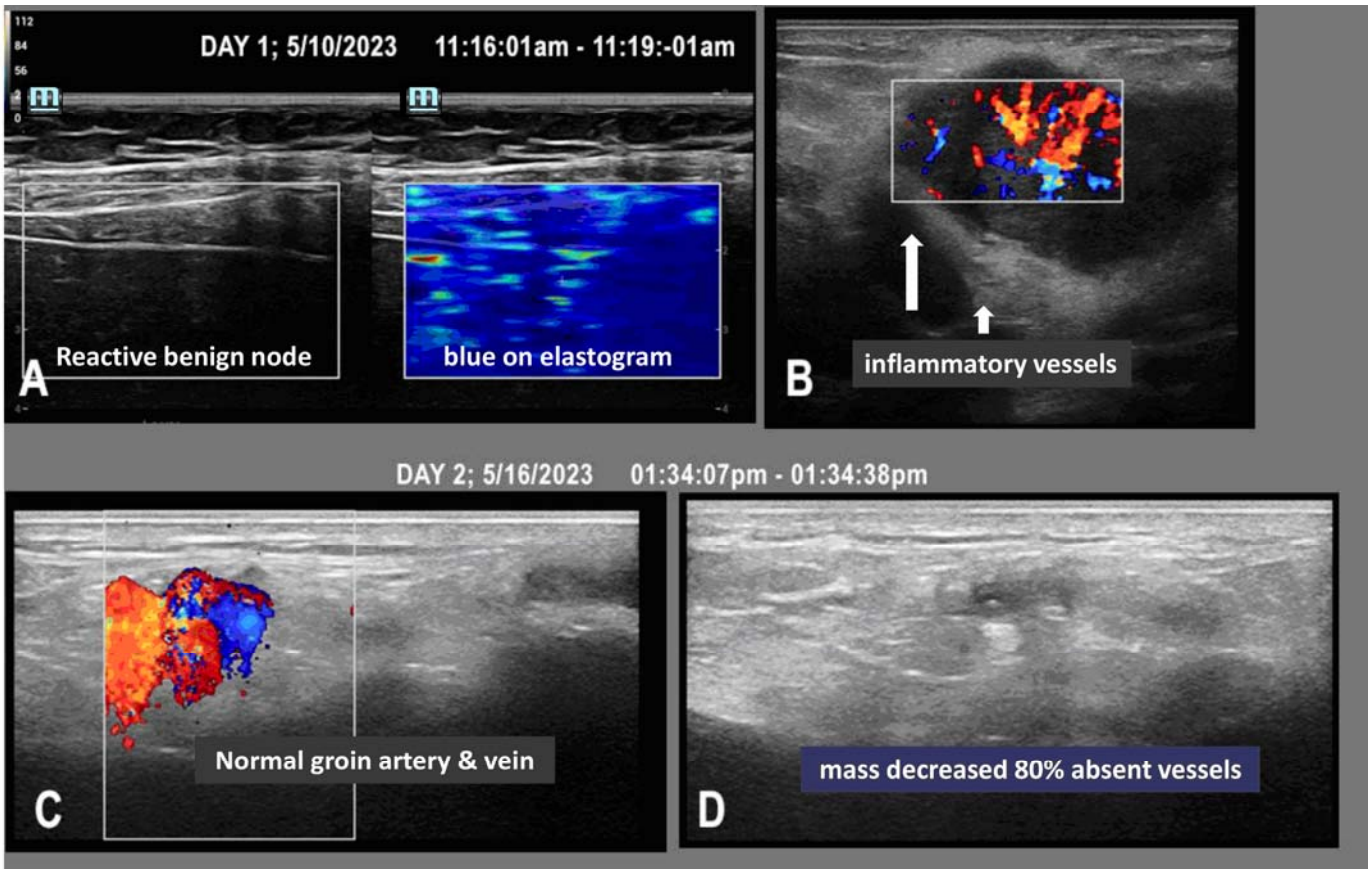
IMPRESSION :
- Decreased Dermal Inflammation
- Mild Ligament Fibrosis and Tendinitis



PATIENT NARRATIVE
"I have been suffering from PSORIASIS since I was 25. Periodically my psoriasis gets inflamed and gets very scaly and very itchy. (When I scratch, which is often it gets worse). I received my first therapy treatment back in March, 2023 and I received various treatments afterward. I continue to have this laser treatment on my right foot, which is the worst and on my right elbow. Lately, the scaling seems much flatter. I don't know whether it's the laser or some of the other home treatments I'm doing for myself… but it seems to be quite a bit improved".

CASE 9 (Gers): Lymph Node / Groin

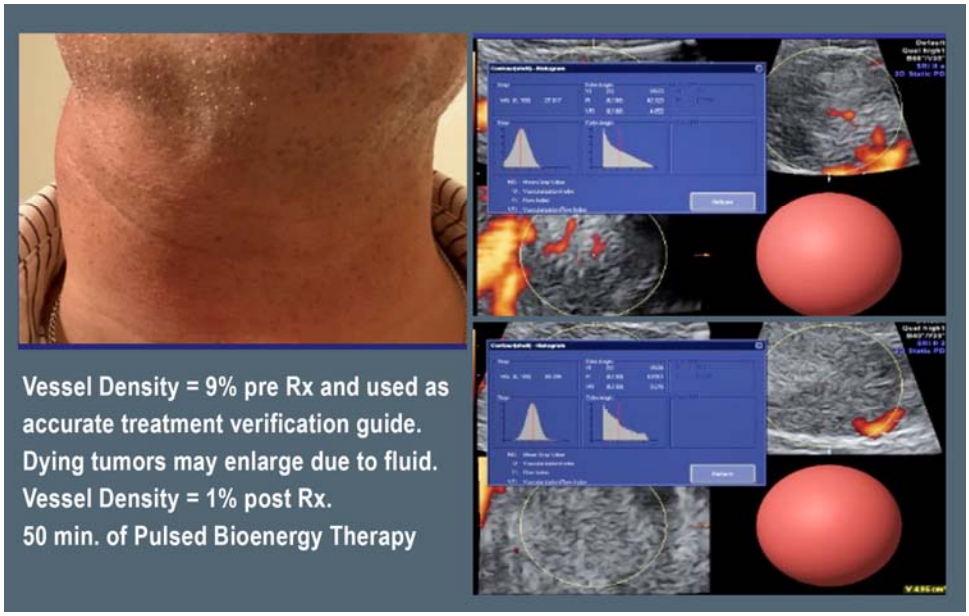
PHYSICIAN'S NARRATIVE: 60 year old female with a painful mass in the groin. This mass had previously been treated for metastatic ovarian cancer and was asymptomatic until two months ago. The sonogram with 3D doppler shows inflammatory vessels in the gland and the elastography confirms that this is an inflamed lymph node as opposed to a metastatic cancer which she had previously in other areas. The elastogram also shows a mean of 16 out of 140 kilopascals indicating an inflammatory nature as opposed to a cancerous nature in the gland. This means that the treatment reduced the inflammation and the patient no longer required a biopsy of inflamed tissue because it was not malignant.



CASE 10 (Sant): Mass/Neck Post Treatment

PHYSICIAN'S NOTES from 6/21

The patient had a large mass in the right neck, which limited his range of motion. This was a result of a medullary thyroid cancer diagnosed five years ago, which has been treated with alternative medicine after the initial biopsy. After one year of traditional therapy, there was no change from 2022 to 2023 when I saw him again for the stiffness in the neck. And although the tumor had not changed in size, we scanned the patient with the Elastogram which showed that only 1cm of the 7cm tumor was actually active cancer because it had a vessel density of 9% with the rest being either degenerative tissue, cellular fluid, or scar tissue. The elastography confirmed the max 7.2 Kilopascals as being the active part of the tumor, which corresponded with the vessel index of 9%.



Patient received therapy and returned for post-treatment scan on the same area, and the tissue showed a reduction in vessel density down to 1% after the second treatment. Initially, the pain control is noticeable to the patient and to the treating doctor, but it is the secondary effect of reducing the malignant blood flow, thus increasing the healing blood flow that is key to long-term results.

CASE 11: Investigating Potential Tumor Formation

Scan 1: 5/24 1:59:16pm (L Leg)

Scan 2: 5/26 10:13:32pm (L Tibia)

PHYSICIAN'S NOTES

The patient came in with a healed cancer of the leg, and the problem was increasing pain in the foot. The question was, is the cancer spreading to the nerve or is it the scar formation producing the pain and the cancer is inactive? The elastography showed no evidence of tumor recurrence and showed a mean KPA of 40 indicating that this was fibrosis as opposed to cancer recurrence.

Scans of the treated mid tibial squamous cell skin cancer shows a scar- yellow arrows separated by 3 mm from the saphenous nerve causing retraction of the fibers without evidence of recurrent tumor formation with an elastographic kPa reading of 40 in the diagnostic range of fibrosis (cancer above 100)