#### (00:00):

Hi everybody. Can you hear me? So this webinar is a first, I've never done this before and that is, I didn't have time to make the slides. I mean, the good news is we have Vegas, a presentation for Phoenix and we have a fibromyalgia workshop and the advanced slides or all updated. Oh, bad news is that I haven't had time to actually make webinars slides. The title of this webinar is take it apart. So the last couple of months I have had, yeah. Really complicated difficult patients. This is the first time ever, I haven't had webinars slides written at least a week before. Yeah. Mmm. I worked on these last night and then actually couldn't stay awake any longer. So started that and we're going to make good live together. That's how it's going to go. What I found out treating FSM patients, especially the really complex ones that tend to come and be treated at the end of the day at the seminars and the really complex ones that send a come and find me at my office, each case.

#### (01:17):

Okay. Sound horrible and complicated and difficult on the patients' lives are usually horrible and complicated and difficult. Okay. But sure. Treat it with FSM has turned out to be really a matter of just taking it apart. So this patient came to the seminar, I think in Cleveland. She's the first one. Okay. Oh, she was 32 30 28 and there's someplace, she had three injuries in the last six years. The F [inaudible] major complaint when she emailed me was light sensitivity, severe light sensitivity. That sounded straightforward. It sounds like I'm treating a head injury. Right. So she's asking to be treated for post concussive syndrome. And when she got to the seminar and gave me the history, it turns out it's a little bit more complicated than that. So the first injury was she was downhill skiing, fell and landed flat on her face on the snow.

# (<u>02:36</u>):

I don't know if you've ever been downhill skiing, but snow is not soft. It is hard-packed Mmm. Kind of crunchy. Little bit like can in concrete. She landed on her face. Mmm. Got up. So she was sort of fine at the time. Didn't realize till she got to the parking lot that she had a concussion. She started with [inaudible] nausea and light sensitivity and within dates she had the symptoms of post concussive syndrome and it included severe tension headaches and pain in her right eye that progressed to severe light sensitivity, cognitive problems. At the time she was working as marketing director from whole foods and I kind of forget if she stopped working after that accident or after the next accident in which she was rear ended at 30 miles an hour. Bye. A large pickup

truck while she was driving a small car. As you recall in an accident, the law of gross tonnage is the only law, so when she said she got rear-ended, that's the second accident.

### (03:50):

I said, okay, and then she had a third accident. There was just 15 miles an hour, but the 30 miles an hour, that was the one that really did her and I think that's after that one that she stopped working. Then it occurred to me to ask her what she was driving and what hit her. So mass, the size and weight of the pickup truck hitting a small car, the lines of force in the amount of force is huge, almost incomprehensible. So she had a concussion again or headaches, correct. I pain in her neck pain got worse. She started having body pain and she was diagnosed with a peripheral neuropathy because she had pain and tingling in her hands and feet that I'm being quiet because I want you to think about that. She had pain and tingling in her hands and feet. Then she said that the light sensitivity became intolerable and created pain in her eyes and her face to the point where when she encountered bright lights, her whole face, especially on the right side would become exquisitely painful.

#### (05:13):

There's a lot of neuroanatomy in neurology involved in this and we'll bring you up to this up to speed to the extent that's possible. Yeah. So then the third accident, she was rear ended at 15 miles an hour, about two years later. So fall on her face, smashed the front of her face six years ago, four years ago, two years after the ski accident, ranted at 30 miles an hour by a pickup truck. Two years after that, rounded at [inaudible] 15 miles an hour. And here we are, two years, I think after the fact, the smaller auto accident, she had so much I pain and pain up the back of her head. [inaudible]

# (<u>06:04</u>):

That she's had for jet Fossette injections. She's had Mmm radio frequency ablations of certain facets. She said epidurals and the pain in her eye and at the back of her head was so bad that she looked everywhere for help and ended up on the internet with a surgeon. Yeah. Who does nerve decompression surgeries. He does surgeries to lease nerves from the surrounding fascia. She's had three of those surgeries. One of them was at the occiput where he peeled away the trapezius and using blunt dissection peeled away the scar tissue between the trapezius and the occipital nerve at the COC. [inaudible] Mmm. Space. So they, the surgery reflected, cut the

trapezius and splenius away from the skull, reflected them back so that he could see the scar surgery, scar tissue around the nerve. And then using blunt dissection heals the nerve away from the fashion. Okay. Okay.

### (07:30):

And that helped the headaches for quite a while. And then because her eye pain was so horrible, [inaudible] especially the right eye, she's had two or three of these nerve decompression surgeries to the trochlear nerve, which is the nerve above your eyebrow. And that was to relieve the pain. [inaudible] The first one didn't work. They did a second one. Okay. So you might be able to tell from the tunnel my voice that okay. Not overly fond of. Okay. These kinds of surgeries and Mmm. So she's on medication, Lyrica, opiates. Mmm. So what did we do? So this is the part where you're actually going to see me build the slides. Can I do this? Hmm. Kind of push escape. Okay.

#### (08:37):

Yup. Okay. So how do you take that one apart? We good? Okay. So how are we going to take that one apart? So what symptoms did she have? She had pain. Okay. Back of her. Yeah. [inaudible] What nerve is that? Well, that's the exceptional nerve. So what are you going to do for that? So we set up machine number one from the neck to the top. Oh, of her head. And that one ran 40 yeah. And three 96 right. Laura is positive. That's machine number one. Okay. Second set of symptoms. Pain. Yeah. Tingling. Okay. Okay. In her and Oh, I see. Okay. Okay. When I showed her the fibromyalgia, thank God, and asked her, is that your pain?

# (<u>09:57</u>):

She said yes. And she only mentioned the pain in the hands and feet. I had to ask her, do you have any pain in your elbows? So it wasn't just and see it was Oh elbow. Yeah, a little bit. All right. We know how to treat that. Right. So that was machine number two. Okay. And that was just 40 and 10 McDuffy or as positive. Okay. All right. Then her biggest complaint is this pain in her. Hi. Do you remember that? Let's see. Okay. Okay. Okay. Okay. Did the C two 3% joint [inaudible] okay. First pain to the PI. So it feels like [inaudible] basically a hot poker [inaudible] [inaudible] right. So take it apart. She number three. Okay. Was Mac just so cute?

# **(11:31)**:

So that is to treat just that. Okay. So that was the eyeball pain. Now, once the pain in her head, the back of her head was better. So we sensation [inaudible] X sensation. Okay. At let's see. Two nerve root. It was hyper [inaudible] the nerve was still connected. It was just hyper-sensitive. So that's why we ran 40 and three 96. Okay. So she still had pain in her right eye. So the first machine we moved machine [inaudible] [inaudible] okay. From the top of her head. Two, her, all right. No closed eyes. You don't want going through the eyes and I put it, I'm just under the eyebrow and that should take care of [inaudible]. [inaudible]

#### (<u>13:09</u>):

And so for the trochlear nerve and for the, Oh, P a T H L [inaudible] branch [inaudible] [inaudible]. That's free. Oh, on the back and abdomen. So she had post concussion syndrome symptoms. So there was one machine back and dinner. Okay. So that was number four and that way ran concussion, T T, H Oh, kind of question Vegas. So that, that's all of those are alternating. We were in TTH cause she kept having not only accidents and stuff happen, she had to picked some of the most invasive, unproven I Ultragenyx injuries that I've ever seen. It was pretty grizzly. Okay. So the second treatment for the pain up the back of her head [inaudible] was to deal with the scar tissue. Right. So anytime I touched the back of her head [inaudible] touch the upper trapezius, we wanted to treat. So the second [inaudible] third treatments treated scarring in the nerve. The fashion.

# (<u>15:08</u>):

Yeah. And the pain but then increase the pain. So we had to go back two 40 and three 96 to take that pain down. Okay. Yeah. Then the surprising thing, what is this pain and light sensitivity? So pain in the right eye. Mmm. Light sensitivity. Let's go look at that. So light sensitivity [inaudible] as soon it was. Mmm. [inaudible] The fact that the pupil yep. Pupil didn't [inaudible] correct. Fast enough. Okay. Okay. What dilate your pupils. Right. That's something that [inaudible] dilate the Vegas and, okay. Parasympathetics [inaudible] yeah. [inaudible] That's correct. So there's light sensitivity is a function of [inaudible] the function of autonomic imbalance basically. Right? Is, that's what I thought.

# (<u>16:59</u>):

Okay. [inaudible] So Mac two, somebody looked it up and [inaudible] Mmm. Trigeminal nerve. Okay. [inaudible] [inaudible] The trigeminal nerve goes to

the silly ciliary ganglion and as it comes out of the jovial or framing the Vegas mixes with the gotcha. Doesn't exactly mix, but that was what we thought at the time. So into her eyes, we were in 40 and five 62 we ran 94 and a one 49 with one Oh nine in addition to earning 40 and three 96 and then the second or third time we treated her [inaudible] Oh, sorry about the frogs. I don't know what that's about. Second or third time we treated her, she remembered that her cornea was that exactly. Scratch but inflamed. Okay.

#### (18:35):

Okay. So we got the anatomy book out and I'm not going to open it here, but think about what happens. Oh. And also all of the muscles around the eye. Okay. [inaudible] And the I ball I suck was painful. It feels like it's in my eye socket. Okay. [inaudible] feels like it's in my eye socket. So we got the anatomy book. I have anatomy app actually. [inaudible] Look, yeah, the eyeball. In a perfect world, if I'd made these slides a week ago, we would go look at the picture of the eyeball that we saw that night and the seminar. Cause right now it's burned in my head. The muscles that and your, I will inside your skull.

#### (<u>19:57</u>):

Okay. Those muscles have at a attach just the cornea. No, remember how the shoulder tendinopathy. Okay. Great trigger points. Okay. And all the shoulder muscles. Okay. [inaudible] Well if your skulls stops the eyeball, it's not, yeah, it goes forward at whatever speed your head. It's just slow. Right. What's that going on? Create. Yeah. And, and muscles and the guys on it. So that was the thought process. What's finally occurred to me after all these years is that, Oh, [inaudible] Hmm. You can look up the protocols and the frequencies in the core of the advanced. That's straightforward. The thought process.

# (<u>21:51</u>):

What makes complex treatments sensible. And when you get comfort, easy, patients are easy. You can do 85% of what you do with what you get in the core, the light sensitivity. So the next treatment, the next treatment, we treated the cornea, the frequencies for the cornea, which I don't remember. You can look them up. Inflammation, [inaudible] torn and broken vitality and the climate. Okay. And then she said that feels better, but Mike, I suck. It hurts. Well there's nothing in your eye socket at that point. The Fossette was quiet, referred pain from the Fossette was pretty much gone. Why would her eye

socket hurt? And if you pushed, press gently on our eyeball to move it from side to side. It was painful.

### (23:09):

If you look at the tendons, we treated torn and broken in the tendons that hook the eyeball muscles to the eyeball. And that reduced the pain. That was interesting. So she had, I saw her Friday, Saturday, Thursdays, Thursday, Friday, Saturday, Sunday. I started four days. Mmm. Ultimately. So she had four treatments and every time she came, okay. She had, we did the same thing. Supine cervical practicum for sets. Mmm. Each night. Okay. And was better [inaudible] light sensitivity was always a problem. Okay. Especially the headlights on the way home. She drove, well her parents drove her two hours each way. Were you treated okay, so Sunday I am, we did the treatment. Okay. The painless, I don't know, two, three, which was pretty good. Okay. And there's a small adjusting and instrument. Yeah. Chiropractors and some PT zoos. Okay. And I mobilized, see Lauren. Okay. That's right. Joints that move, yeah. Are in flange and regenerate.

#### (<u>25:11</u>):

And then her pain was a zero, right. Sense to me was better. And I referred her to PT. So in, I dunno, six, eight years the followup. Okay. Was physical therapy, everything. She had the underwear. Okay. Was passing. Okay. Okay. The surgeries, injections, RF. Absolutely. Nobody did anybody, anything manual. Obviously you can't, if you're a chiropractor or a PT, you can't yep. Adjust or do any sort of high velocity murders and the upper cervicals cause the facades are so jacked up. But physical therapy, she has a customer care that basically does what we did. Okay.

# (<u>26:21</u>):

Foreign exchange so she can run neck pain. Okay. Okay. Surfing Vegas and a concussion. Okay. Mmm. Is that pain? That's pretty much all. Yeah. That's pretty much what she has. So what looked absolutely impossible became manageable. Oh, good. Apart. And then the therapy she has already seen the other followup would be an FCO V D up until now. And she's already seen one already. She's actually seeing the one in Chicago. If you've never read the book, the ghost in a line. Okay. [inaudible] My brain. Mmm. That will tell you what a real significant head injury is like. And how prison glasses and optometry can help. And that's why dr [inaudible] or to Cal ski is coming too Phoenix to teach us how to do that. Because until two years ago when I got

prism glasses, when I started seeing a patient that I sent to one of these visual development optometrist, I have no idea what a profound effect that prison glasses in the V, the visual system have on [inaudible] balance and a musculoskeletal system. Patient number two also came to a seminar. Same sort of thing, complexity, but different mechanisms and also slightly different symptoms. This patient didn't have the items. No license. Tivity severe right. Occipital headaches as I joined pain. It's capsular pain. Neck pain. Yeah. [inaudible] [inaudible] [inaudible]

### (28:38):

Okay. Yeah. She had, what did they do for her? She had all passive care. So the treatments that she had or Fossette. Okay. Injections, epidurals, RF, the Fossette occipital other blocks. Mmm. I guess that's kind of, that was kind of it. Notice that it's all passive. Nobody did anything active with her. Okay. When we were in Chicago, she got treated at the end of the day. She came in with her pain, I dunno. Name was, Oh, come on. Pain was probably six, seven, eight and she's pretty stoic, so that's a real number. So the treatment I'll show you, that reduced the pain to a two, three, four. And we treated her every night. We treated her, I think just Friday, Saturday, Sunday. So she had probably three treatments. And as we were leaving Sunday night, she bought a custom care for herself and her dance daughter. Yeah. And her daughter [inaudible]. Oh. And I'm really hyper mobile. Proceeded the push your thumb clear back onto her arm.

# (30:23):

That's our, there's downloads. That's genetic show. After the daughter demonstrated that, I turned to the patient and said, are you hyper mobile? At which point she grabbed the skin on her forearm and lifted it up five, six inches in 35 years of being treated by pain management, PMNR physical therapy, massage therapy. Everybody that treated her, nobody told her she had her stand. Those, no. She had some of the symptoms that go with Ehlers-Danlos. Mmm. Anxiety, depression, adjustive difficulties, all of that. She was really athletic as a teenager and through her twenties. Mmm. So there was an undiagnosed arrows downloads when she started talking about her, some of her other symptoms, I did a vestibular screen [inaudible] okay. And she flunked it. And so she has the cat, the suit.

# (31:37):

Okay. In her right eye anyway. So she had psychotic pursuit in the right eye and bounces like crazy when we did. So there's the two missing links there. Understand those, the vestibular disorder. A sensory exam. Okay. Hyper hyper. Yeah. Let's see too. I always check. But people have Mmm. Headaches up the back of their head. Always have them always check sensation at [inaudible]. That's hyper. So the treatment, hello? Supine cervical practicum. Pretty much [inaudible] I remember the one I did the first three treatments, I didn't, no that she had earlier downloads, but it's basically the French cervical practicum that treats for sets and no, by then she had sent me her imaging.

#### (32:49):

Okay. And she does have a set degeneration. Okay. DJ formation, right? [inaudible] Yeah, no. Is that degeneration? But she also has disc bulges at all cervical levels. See two, three, four, five, six and seven. The other thing you need to know about the [inaudible] that refers okay. To the eye and the back of the head. Okay. C two, three disc. I'd look up. It also refers pain to the back of the head, right. Where correct. This occipital headache is, and then under her jaw. So her pain is not just at Mmm, right. Occipital headaches, but it's also under. Okay. [inaudible]

### (34:03):

Sure. [inaudible] Oh, the back of the neck. Okay. Why don't you to think about that? Jeez. Aw. Ah, for the neck. Okay. So we're used to, especially at the core level, you're used to thinking about neck pain and headaches in terms of [inaudible] for sets nurse. Okay. The advanced, I'm a little prejudice because I have been knee deep neck deep in the Vegas for five, six weeks doing the Vegas presentation for the advanced. Yeah. And Vegas comes out at the juggler foramen just behind your jaw, just behind your ear. It has a branch that goes under the skull, joins up with the meningeal artery. [inaudible] Enervates the back of the skull. So the meningeal branch of the dura goes to [inaudible] back of the skull. The dura inside your skull actually is innervated by three different nerves. So the trigeminal nerve, the facial nerve, and the glossopharyngeal nerve and the Vegas all innovate the dura and, and the upper three cervical nerves. So the sure when she has this awful headache, the dura is involved. The other thing that I found out is that [inaudible] okay is sensitive to stretching, which will produce the sensation of a headache.

# (36:19):

The meningeal branch of the Fagan follows the meningeal artery where that artery feeds just the back half of the dura. So this is a patient I haven't seen in 20 years. Maybe I saw her 25 years ago or somebody like her and I just missed it because this is not anything I've ever thought of before. So she has very limited range of motion in both the dura and the neck. Think about NEC range of motion. Is the cerebellum going to let you move your neck full and just the Vegas is adhered to the fascia. [inaudible] Get the fiber, the Vegas, they go from the base of your skull. There are multiple branches. Where is that picture? There are branches of the Vegas that go to the vocal courts. The thanks the pharynx, the Vegas controls all of the muscles of speech and swallowing. The Vegas is everywhere. We think of the Vegas as it enters the thorax because it interface the esophagus, the heart, the immune system, the spleen. Mmm. The [inaudible] stomach. The gut, but there are multiple branches of the Vegas. I thought [inaudible] imported a picture, but I guess I didn't that are up in the neck. Well, when you have heart surgery, whiplash injuries, neck surgery, sore throat, sinus infections, anything that's going to cause inflammation that will cause adhesions. Yeah. Your Vegas has stuck to this.

#### (38:19):

How do you increase the range of motion? We treated for scarring in the Vegas scarring and the fashion that increased range of motion. Somebody called this afternoon and asked, are we going to talk about concussion in Vegas? And this is from the course seminar these days. Mmm. 94 and nine 70 with 200 trauma. [inaudible] This allergy reaction, the basic Madonna for the concussion protocol, but then you quiet the activity of the muddle of 40 and 94 why would you do that? Because the Vago nuclei, the nucleus ambiguous and the Mmm nucleus of the solitary track they think are all in the middle. So you want to quiet the way to quiet the Vago nuclei article. Quiet modality. You don't have to, we don't have a frequency for the bagel nuclei. We have a frequency for the modality. See, that's probably why the concussion protocol does such a good job. Do the concussion protocol one 40 and 94 then do the rest of the concussion protocol. Treat the pituitary 6.8 and 38 and then the stress centers in the brain. We'll turn off the Vegas when there has been physical tissue injury [inaudible] when there's been physical tissue injury. Mmm. Or infection.

# (39:54):

So stress centers in the midbrain 89 yeah. Turn off the Vegas so you that you can survive physical trauma and infection because the Vegas quiet the

immune system, she wants to turn down the stress centers, assuming the physical trauma is repaired and the [inaudible], the infection is gone, then turn the Vegas backup. So trauma in the Vegas, increased secretions in the Vegas, vitality in the Vegas. [inaudible] So, yep. There's a lot of people seem to have read poor juices and other peoples you series about the Vegas and the dorsal bagel nuclei. Basic challenge with that is it's not anatomically correct. [inaudible] Once the Vegas leaves the skull, there's only one of it. There are two different vagal nuclei in the brainstem, in each one of them does slightly different things, but once it leaves the brain, it's one Oh nine in the brain. It's 94 in our world. So that was an interesting concept for this patient. Mmm. Now we treated her [inaudible].

#### (41:23):

Where was that? Chicago and when she got to Portland, so I told her, it's like, okay, nobody has ever done anything active with you. So she is come to Portland and she's doing physical therapy. OGI style with exercise and I've been treating her all week and this pain at the suboccipital area is persistent. When I treat for scarring, it helps immediately, but makes her flare up. That's not normal. So she, we always run the Suprep cervical practicum [inaudible] effectively. So the neck pain protocol. So for sets discs, I don't know that many people that ever see two, three desk. Mmm. Then we treat Mmm.

### (<u>42:33</u>):

Manually scarring scarring in [inaudible]. Yeah. Dora. Mmm. And that actually made her neck worse. I got her too. An optometrist, F C O V D gross, and just the exam. Okay. Made her nauseous an unbalanced. Okay. And most of you know at this point that I've got my ears, I was motion sick for three days after this exam. They challenge the brain and move the eyes and it Hmm. Hmm. It took two meclazine to get her home and she flipped it. She always feels as if she's back on her heels. Her posture's off is pretty awful. So she leans forward with her hips and then writes for trunk. And that's vestibular. When we did the [inaudible] tell, make exam the optometric exam, her weight and her balance shifted back and forward. So I treated her five days in a row now, Oh four days in a row. [inaudible]

### (<u>44:11</u>):

Every time I treat scarring in the nerve, inflammation at the nerve helps at the time, but she flares up horribly a couple of hours afterwards. Today I thought, well, scarring in the dura, if you move her knees, she's laying on her back,

she's got knees bent and you rock her knees side to side. She's got 10 degrees of motion. That's not normal. [inaudible] I said confidently, Oh, that's scarring in the DRA. I did scarring in the Durham, made her headache worse, made her neck hurt and the range of motion in her legs would not change. So 13 and four 43 [inaudible] change her basically sacred [inaudible] or pelvic range. Then it's not scarring on the Durer. Right. Okay. What else would do it? The question is take it apart. Why is the cerebellum okay? Stopping emotion.

#### (45:35):

Yep. That actually, where is it? It's totally unconscious. You would get her knees across five, 10 degrees and the muscles would just stop the motion. Why is the circle on doing that? Totally unconscious. What controls tone and balance? Inner ear [inaudible] [inaudible] enter your could do that. So I did 40 I'm 44 quiet inner. Yeah. And I didn't expect it to work. Okay. And the range in the, I guess that's not hip range, but range motion. The pelvis, yes. Increased too. 20 to 30 degrees. That was a complete surprise. So her glasses are coming tomorrow? No. [inaudible] In order to fix her neck, she's going to need the stipular therapy. Prison Glassons we hope physical therapy [inaudible] but what we found out was anything that we did anything? No. Anything, any of even anything, the slightest. Okay. Okay. Physical. Mmm. Strengthening. Okay.

### (<u>47:44</u>):

Or mobilization. [inaudible] Increases with pain. Okay. That was interesting. The other thing that I did that worked today was 40 and three 96 of the back of the head? No. Okay. Then 81 and okay. 81 and three 96 okay. Oops. Looks like we lost the internet. No. Okay. 81 and three 96 because the nerves in the back of the head good the mile and eight and she had the his way of describing, so the pain at her [inaudible] occiput. Okay. Okay. Pain at her occiput and behind [inaudible] jaw she described as fullness. That becomes okay. And we're talking seven age out of 10 pain. Now this is 30 years, so this has been going on for 30 years. No matter what anybody does, unless they actually use a lot of cane. That's been painful. So we ran 81 and three 96 and then you see this word fullness. See that works right there. That word pick it apart. Think about what you know about the Vegas. The dura is sensitive to stretching because the Vegas has stretch receptors. Jurors that go to the blood vessels at the time back of your skull.

# (<u>50:00</u>):

See that this feeling of fullness that she pointed to, it was right at the juggler frame. So the take it apart, part of this [inaudible] Oh, it's almost time to go. The take it apart. Part of this that we did today. It not just 81 and three 96 to correct the D myelinated nerves, but 81 on one Oh nine up the back of her skull and that took him down. Okay and did not. Okay. Increase your pain. So when it's not scar tissue, we really have to consider the possibility that it's denervation. And you're going to hear this in Jody's lecture on CRP, Sierra CRPS, that nerves D myelinate and when nerves D myelinate they become painful. It's like Phantom limb pain for your skin, for your Vegas. And speaking of Phantom limb pain, let's go to the next one. And that this is a lady who had a pancreatic biopsy two years ago.

#### (51:20):

Completely healthy, completely healthy, never a sick day in our life, no pain, no nothing, completely healthy. They had a abdominal CT looking for something and as an incidental finding, maybe it was a kidney stone. They saw dilated pancreatic duct. It was an incidental findings. She did no symptoms or enzymes were normal, everything was normal, but they wanted to do a pancreatic biopsy. The duct rule out cancer biopsy was negative, but after the biopsy she had severe abdominal and Epic actress have a gastric pain. Okay. Rated at a nine or 10 out of 10. Horrible enzymes were not elevated. She has never had pancreatitis. Enzymes were not elevated after the first visit. She mentioned the pain is worse at night.

# (<u>52:21</u>):

Lyrica helped. She has no appetite. The Vegas regulates appetite. So I want you to look at, we're going to go through this really quick and we'll do more of this at the advanced [inaudible]. The Vegas anatomy. The Vegas has motor fibers that start in the nucleus and big waves in big EWAS in the Mmm Mudela. There's the, the little, there's the nuclei there. Okay. Regulate speech and swallowing. Esophageal plexus, the cardiac plexus Vegas follows us off the esophagus through the diaphragm. And here, here it is. Okay. The visceral sensory fibers, there are small unmyelinated preference or nerves go from the stomach and intestines, liver, pancreas and spleen up to the brain. Stretch receptors in the stomach respond to volume. Carrie, unconscious non pain sensations of hunger, satiety and nausea. Visceral pain from the heart. Esophagus. Apparently the [inaudible] pancreas, those joint larger myelinated vagal afferents. Right. So this patient think about all right. General sensory. You don't, you need to know that one. So this patient, what is the mechanism? So think through it.

#### (54:01):

No. So biopsy does what takes a chunk. Oh, the Oregon, right. All right. If the Vegas has pain fibers [inaudible] okay. And it does. And yeah, the biopsy. Mmm, cut that nerve. Okay. What's it like? It's like Phantom limb pain for her pancreas, right. Pain worse at night. Always going to be central. That's all I meant. So that's going to be 40 and 89. So I use one machine on her. There was 40 and 89. Yeah. And then what's the problem? What was one machine that ran the treated the pancreas. Okay. [inaudible] Okay. Contacts in the bathroom. Abdomen. Okay. This one was from the neck to the abdomen. [inaudible]

#### (55:39):

And then if the problem is [inaudible] [inaudible] missing chunk of pain, nerves in the Vegas, then the solution is going to be be to treat 94, one 24, 81 and 49. And the Vegas, no, she's unfortunately one of those people that doesn't do well. I mean, it doesn't have any sort of change in symptoms while she's on the table. But after the first treatment, she had the best day she's had and I dunno. [inaudible] Cheers. So we're going to give her a customer care tomorrow. Why is this there twice? Hmm. I copied those sides twice. So that's how you take it apart. Okay. Why does she have this horrible pain in her abdomen? Well, all they did was send it tube down our esophagus through stomach, look at teeny fiber down the bile duct into the pancreas, take a little chunk out with a little, grab her little biker [inaudible] bites the tissue, brings it back up through her mouth or nose and found out she didn't have cancer. So there's no, it's not like she had a big scar in her abdomen. There's no scarring. It's just there's this chunk missing out of the Oregon. He's like, it had to be family, don't know.

# (57:38):

And then she had a very good day pain, no pain last night. So it looks like we might've gotten lucky. And then this is a lady that was diagnosed with Mmm. Chronic fatigue 30 years ago, and it turns out she was just 40 and 10 patients. So she didn't have chronic fatigue. She never had Emmy, as they say in England, never had myalgic in South LA PD. What she had was 40 and 10, and she was pain-free. The end of 60 to 90 minutes. Stayed pain pre over the weekend, was pain-free again when she came back on Sunday. So that's what we do. You guys are changing medicine one patient at a time. These are three patients that will never be the same for Mmm. And you are, or changing patient's lives and ways that will change the world. So I'm incredibly honored

to be associated with [inaudible] with all of you. Thanks for coming and I'll talk to you next time.