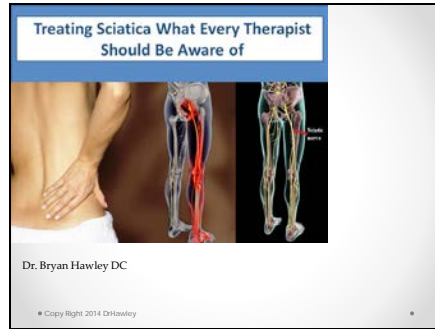


Slide 1



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Slide 2



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Slide 3



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Slide 4

## Grand Rounds Case 1

Client: Matt

- Referred from CoWorker to YOU
- Has LBP and Sciatica pain every day but gets worse late afternoon
- Travels Down to R foot/big toe
- Has Xray and MRI from Local Ortho Surgeon whom gave ok to see you
- No recent Trauma or Past Surgery
- Taking OTCs anti inflams (only temp help)
- NCV taken last week produced Negative results
- At times when sitting R foot will tingle and twitch at night

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Slide 5

## MRI Report

- EXAM: OPEN MRI LUMBAR SPINE (WITHOUT INTRAVENOUS CONTRAST)
- IMPRESSION/DISKOGENIC FINDINGS:
- L4-5: ANNULAR TEAR WITH SMALL CENTRAL HERNIATION, MILD INDENTION ON THECAL SAC. BACKGROUND BROAD BASED DISK BULGE.
- L5-S1: MILD BROAD BASED BULGING, RIGHTWARD FACET HYPERTROPHY FLATTENS THE POSTERIOR RIGHT LATERAL RECESS WITH MILD MEDIAL MASS EFFECT ON THE RIGHT S1 NERVE ROOT IN THE LATERAL RECESS. FACET HYPERTROPHY ON THE LEFT WITH NARROWING OF THE LEFT NEURAL FORAMEN AND LIKELY IMPINGEMENT ON THE EXITING LEFT L5 NERVE ROOT.

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## Slide 6

### Matt's Film

What would you do if this was presented to you?



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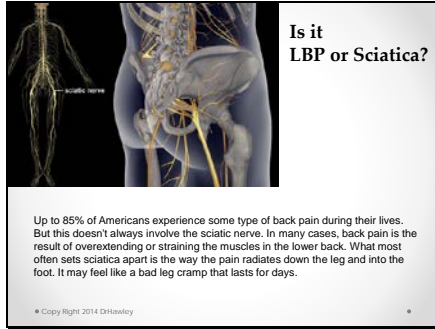
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Slide 7



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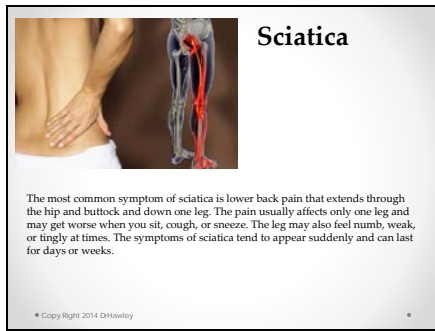
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Slide 8



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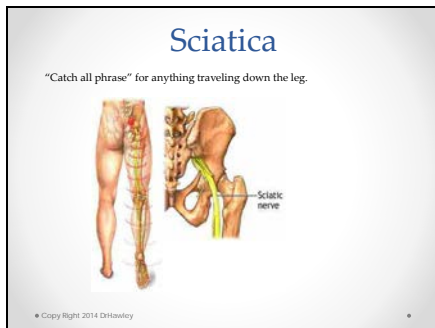
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## Slide 9



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Slide 10

## Types of Sciatica

- Discogenic sciatica
- Peripheral entrapments
- Chemical induced
- Gestational



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Slide 11

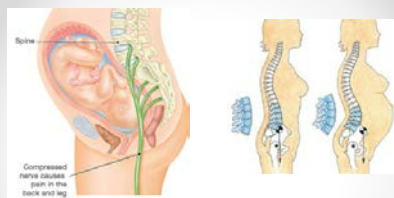
## Gestational Sciatica



Most people who get sciatica are between the ages of 30 and 50. Women may be more likely to develop the problem during pregnancy because of pressure on the sciatic nerve from the developing uterus. Other causes include a herniated disk and degenerative arthritis of the spine.

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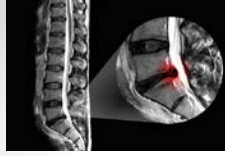
Slide 12



During the third trimester, and as the baby starts to move into birth position, the pressure can inflame the sciatic nerve. It is believed that this is the most common period for sciatica during pregnancy (although it can occur at any time) especially if you have a previous history of spinal disorders.

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Slide 13



**Cause: Herniated Disk**  
The most common cause

The most common cause of sciatica is a herniated disk. Disks act like cushions between the vertebrae of your spine. These disks get weaker as you age and become more vulnerable to injury. Sometimes the gel-like center of a disk pushes through its outer lining and presses on the roots of the sciatic nerve.

**We will discuss this further a bit later**

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Slide 14



The piriformis is a muscle found deep inside the buttocks. It connects the lower spine to the upper thighbone and runs directly over the sciatic nerve. If this muscle goes into spasm, it can put pressure on the sciatic nerve, triggering symptoms of sciatica. Piriformis syndrome is more common in women.

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Slide 15



You might not think of too much cash as a source of pain, but a fat wallet can trigger piriformis syndrome. The condition can affect men who wear their wallet in the back pocket of their pants. This puts chronic pressure on the piriformis muscle and can aggravate the sciatic nerve over time. You can avoid this problem by keeping your wallet in a front pocket or jacket pocket.

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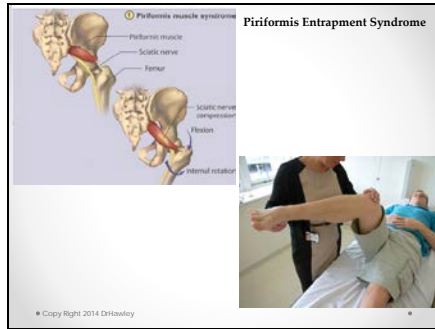
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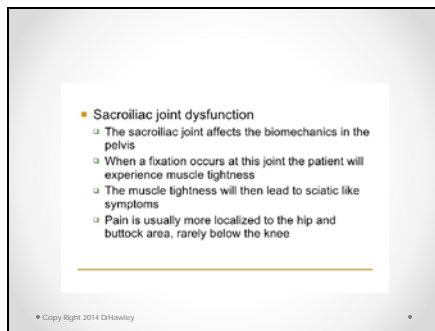
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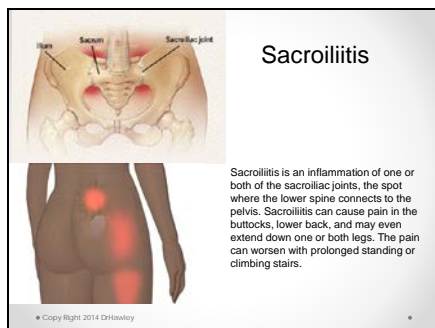
## Slide 16




## Slide 17



## Slide 18



## Slide 19



**Sciatica Relief: Medication**  
Over-the-counter pain relievers can provide short-term relief from sciatica. Acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs), such as aspirin, ibuprofen, and naproxen are options. Your doctor may give you a steroid injection to further reduce the inflammation.

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## Slide 20

Just "naming" a symptom SCIATICA really doesn't tell the practitioner what the problem is.

In order to effectively address the problem we first must identify it.

Here is some symptoms that commonly manifest.

- The pain is always one-sided
- You will feel radiating pain
- Prickling sensation
- Tingling Sensation
- Numbness
- Some weakness or difficulty moving your leg
- Sharp pains

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## Slide 21

**Referral**

- u HNP (> 8 weeks)
- u Ominous signs/ex - fever, weakness, bowel/bladder dysfunction
- u Progressive neuro deficit or flaccid paralysis

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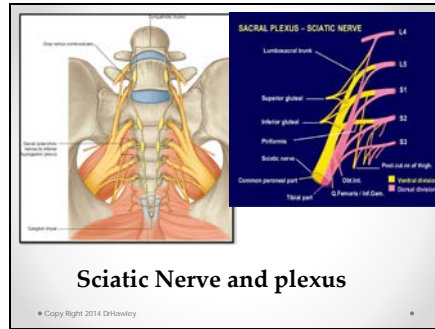
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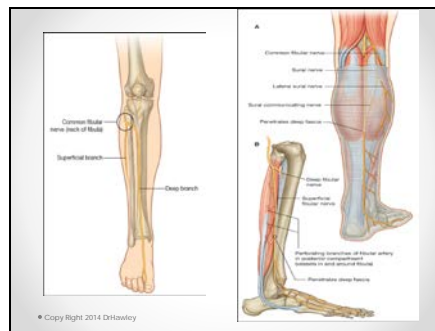
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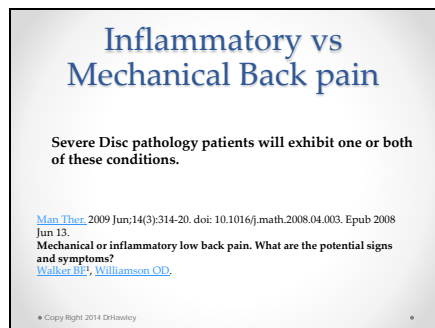
Slide 22



Slide 23



Slide 24

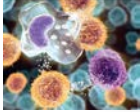




Slide 25

### Chemical ( Inflammatory)

- Pain that doesn't go away at night, awakens you.
- Improves with exercise, and walking throughout the day.
- Worse in the morning
- Can alternate sides. Esp. in the glutes



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Slide 26

### Mechanical



- Back pain that goes away when you go to bed
- As day goes on gets worse
- Exercise increases pain
- Usually associated with a trauma, sneezing, lifting.

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Slide 27

### Mechanical pain patterns



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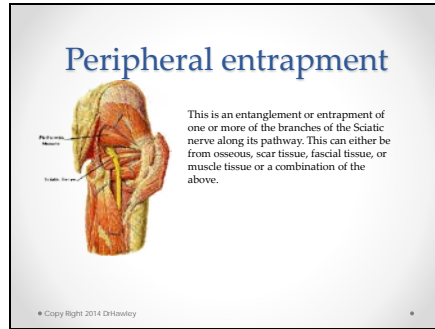
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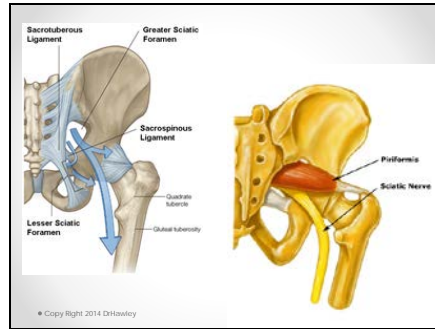
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## Slide 28



Slide 31



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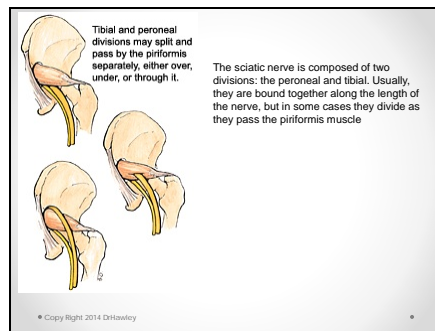
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Slide 32



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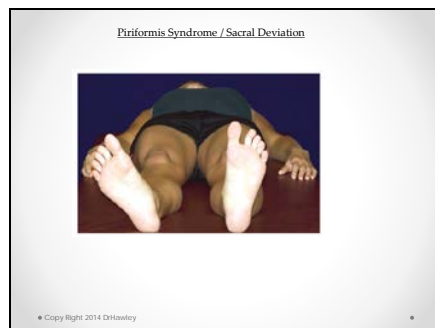
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Slide 33



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## Slide 34

Piriformis work

Start working from the sacral border out to the femur in a slow methodical approach.

Use a penetration ratio of approx  
1/3 downward pressure  
2/3 medial pressure

This will also fluctuate depending on patients habitus and physical profile.



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## Slide 35

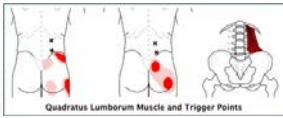
Piriformis muscle stripping



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## Slide 36

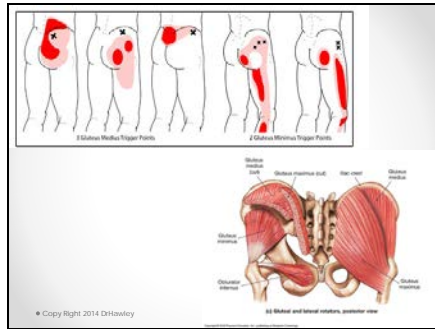
QL Trigger Point



Quadratus Lumborum Muscle and Trigger Points

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Slide 37



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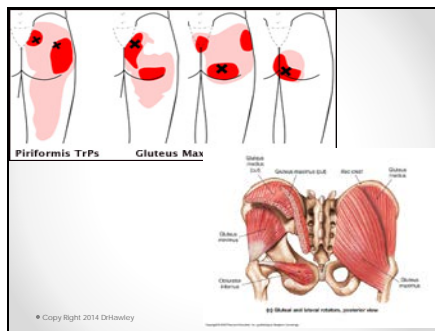
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Slide 38



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Slide 39

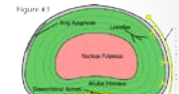
# Disc Anatomy

Nucleus supports the majority of the axial loads

Annulus provides support

Disc dehydration causes shifting of axial load to annulus.

Biochemical reactions take place.



The diagram, labeled 'Figure #1', shows a cross-section of a vertebral disc. The central pink area is the 'Nucleus Pulposus'. Surrounding it is the green 'Annulus Fibrosus', which is divided into 'Superior Annulus Fibrosus' and 'Inferior Annulus Fibrosus'. The outermost layer is the 'Cartilaginous Endplate'. Below the disc, the 'Superior Surface of Vertebral Body' is shown with a 'Posterior' orientation. The 'Intervertebral Foramen' is also labeled. A yellow arrow points to the 'Posterior' side, and another points to the 'Anterior' side. The diagram is credited to '© CrossMark.com'.

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Slide 40

## Degeneration physiology

Increase in axial load causes increase in intradiscal pressure.

Proteoglycan synthesis stops (anhydrosis begins) Disc cells need @ 3atm to function normally.

What water is left is slowly being forced out.

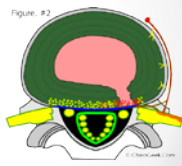
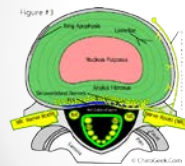
Nucleus deforms, shifts axial load to annulus causes lamellae to fold inward.

H<sub>2</sub>O leaves (H<sub>2</sub>O is basic) and the disc becomes acidic, further diminishing cell reproduction.

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Slide 41

Normal Disc      Disc Bulge



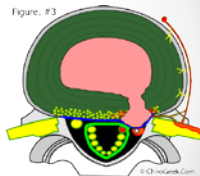
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Slide 42

## Disc Protrusion

PLL still intact and disc still contained.

Patient at this point will demonstrate pathology on MRI and will have positive disc findings.



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## Slide 43

# Disc Extrusion

PLL has been compromised

Chemical Radiculitis possible

Patient will have MRI observations and demonstrate disc pathology in physical exam.

Figure 4

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Slide 44

# Leaking Annular Tear

Figure #6

Possible Chemical Radiculitis

The diagram shows a cross-section of a vertebra. The vertebral body is pink, and the intervertebral disc is green. A yellow arrow points to a tear in the annulus fibrosus, through which a red arrow indicates the leakage of disc material. This leaked material is shown compressing the spinal nerve roots, which are depicted as a cluster of yellow and red dots. The surrounding bony structures are shown in grey.

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Slide 45

# Matt's MRI Report

- EXAM: OPEN MRI LUMBAR SPINE (WITHOUT INTRAVENOUS CONTRAST)
- IMPRESSION/DISKOGENIC FINDINGS:
  - 4. L4-S1: ANNULAR TEAR WITH SMALL CENTRAL HERNIATION. MILD INDENTATION ON THE CAL SAC. BACKGROUND BROAD BASED DISC BULGE.
  - 5. L5-S1: MILD BROAD BASED BULGING. RIGHTWARD FACET HYPERTROPHY FLATTENS THE POSTERIOR RIGHT LATERAL RECESS WITH MILD MEDIAL MASS EFFECT ON THE RIGHT S1 NERVE ROOT IN THE LATERAL RECESS. FACET HYPERTROPHY ON THE LEFT WITH NARROWING OF THE LEFT NEURAL FORAMEN AND LIKELY IMPINGEMENT ON THE EXITING LEFT L5 NERVE ROOT.

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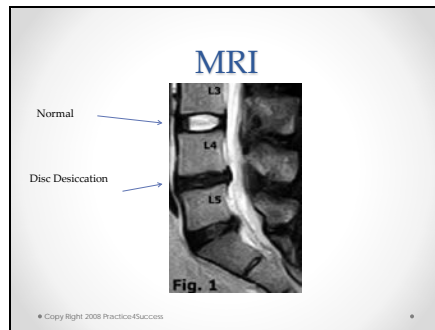
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Slide 46



Slide 47



Slide 48






Slide 49

# NEUROSENSORY

Stretch the Tissue (Structure) and NOT the tape



Used in  
LATER/CHRONIC  
stages of care when you  
want to allow for ROM  
but still want mind  
muscle connection and  
help with fluid  
exchange.

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Slide 50

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Slide 51

A person in an orange shirt is applying a pink and blue KT Tape to the lower back of a patient wearing a pink shirt. The patient is lying on their side. The video player interface shows the video is titled 'KT TAPE - Sciatica' and has a URL of 'http://www.youtube.com/watch?v=iWnA7cdfk4w'. The video player also shows a progress bar and various control icons.

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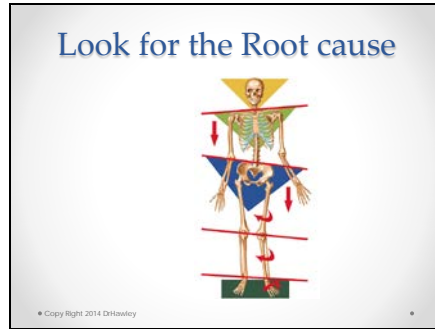
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Slide 52



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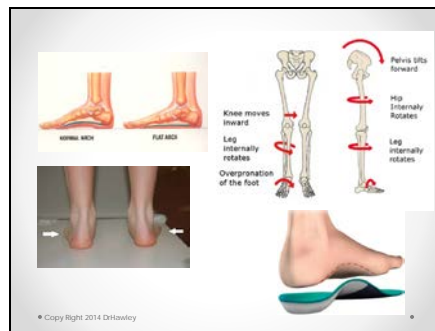
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Slide 53



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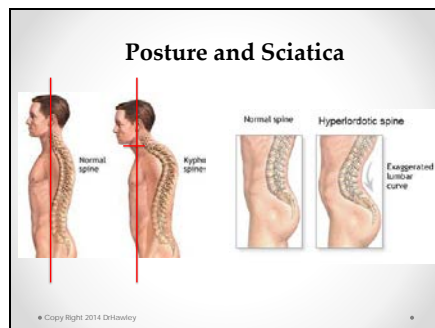
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Slide 54



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ANTERIOR PELVIC TILT

POSTERIOR PELVIC TILT

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# The End THANK YOU!

Recording

Notes

Certificates

ClubLMT

Email [info@clublmt.com](mailto:info@clublmt.com)

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