

Case of Acute Weakne

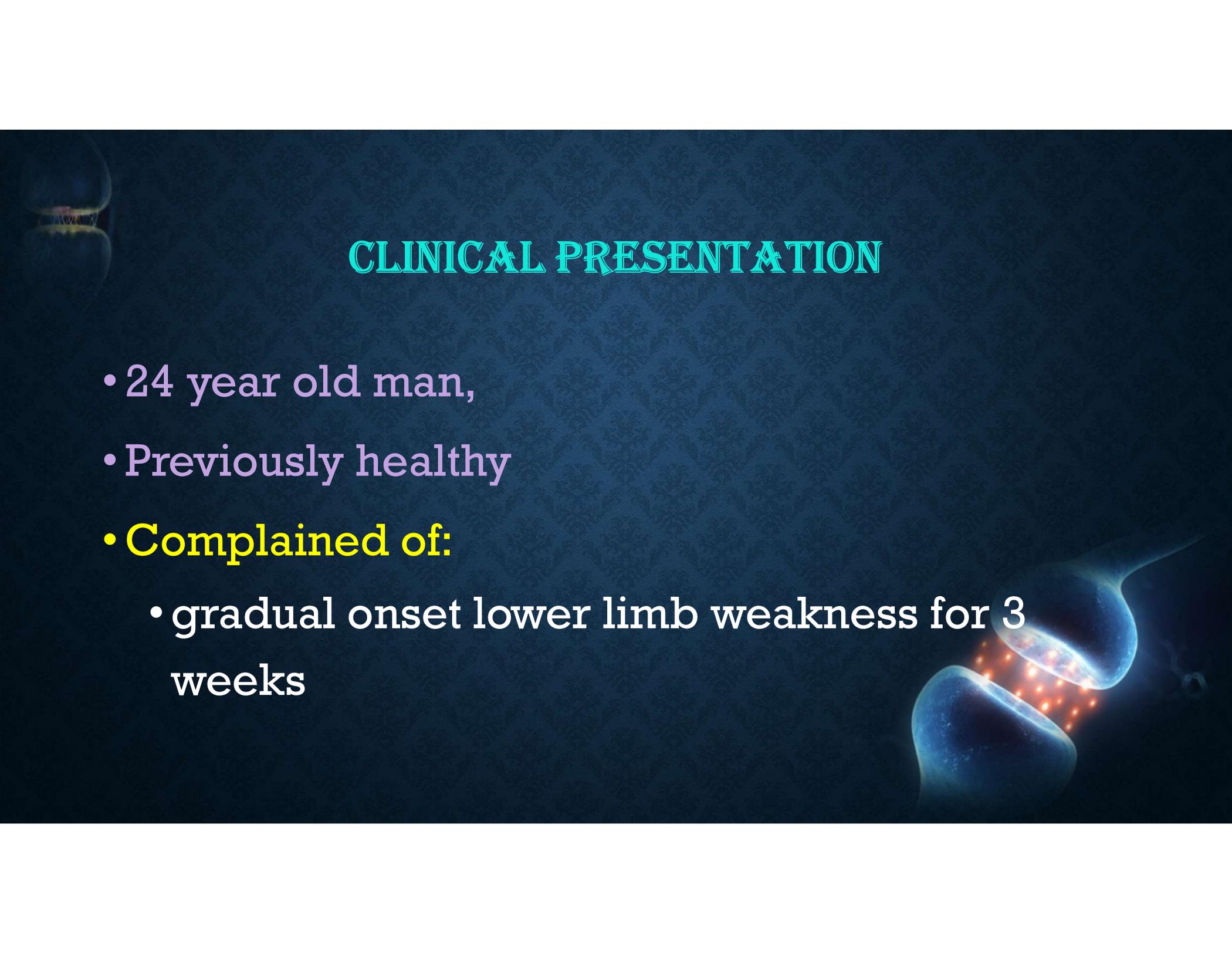


CARREL KRUSEN MEETING

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Assistant Professor

King Abdulaziz University hospital, Jeddah, KSA



CLINICAL PRESENTATION

- 24 year old man,
- Previously healthy
- **Complained of:**
 - gradual onset lower limb weakness for 3 weeks

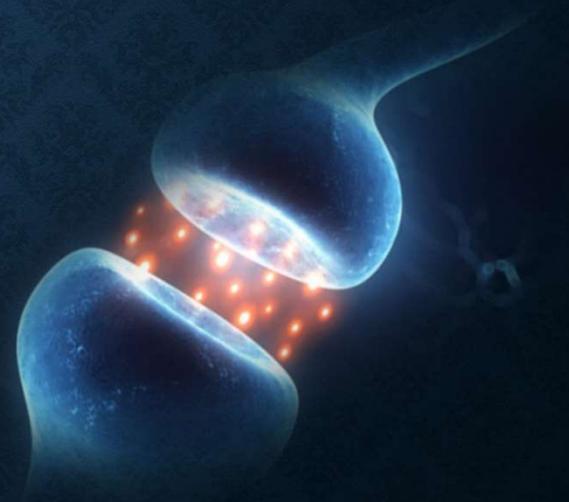


CLINICAL PRESENTATION

- Difficulty
 - Walking and climbing stairs
 - Standing up from chairs or floor
 - Mild weak hand grip (mainly with opening bottle)
 - No difficulty using or placing items over the shelf or brushing his teeth
 - **No** sensory symptoms
 - **No** ocular, facial or bulbar weakness
 - **No** sphincter symptoms nor low back pain
 - Lost about 10 Kg over 2-3 months period
 - **No** other constitutional symptoms
- 

CLINICAL PRESENTATION

- **No** family history of nerve or muscle disease
- No recent travel
- No direct contact with animals.
- **Social Hx:**
 - Lives in a village
 - Metal welding worker



CLINICAL EXAMINATION

- Normal cognitive and cranial nerve exam
- **Tone:** normal
- **UL power (R/L):** 5/5 except deltoid 4+/4+
- **LL power (R/L):**

Hip flexion	Knee extension	Knee flexion	Dorsiflexion	Planter flexion	Inversion	Eversion
3/3	4+/4+	3/3	4-/4-	4+/4+	4+/4+	4/4

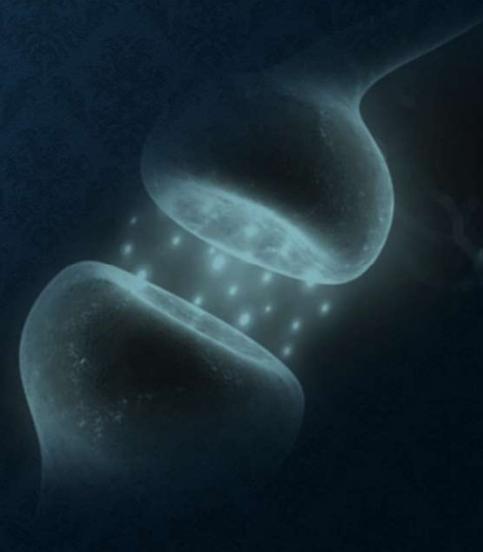
- **UL reflexes:** bilateral Biceps, triceps and brachioradialis were 2
- **LL reflexes:** bilateral Knees jerks and ankles jerks were 0
- **Planter:** down going

- **Sensory examination:**
 - pinprick : 100% (distal and proximal in upper and lower limbs)
 - Normal vibration and proprioceptive
- **Cerebellar examination: unremarkable**
- **Gait: waddling gait**

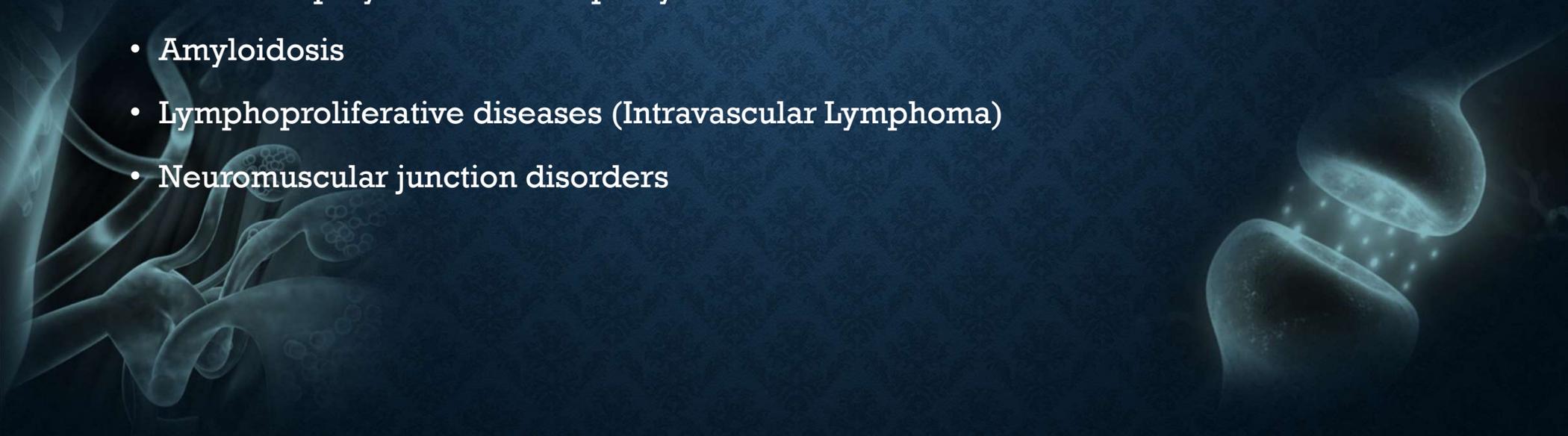
SUMMARY

- 24 years old man with progressive lower limb weakness for 3 weeks. On examination: proximal lower limbs weakness, areflexic in lower limb, intact sensory exam and waddling gait.

DIFFERENTIAL DIAGNOSIS



- Inflammatory myopathy (due to intact sensory system)
- Inflammatory polyradiculoneuropathy: AMAN
- Infectious polyradiculoneuropathy: HIV
- Amyloidosis
- Lymphoproliferative diseases (Intravascular Lymphoma)
- Neuromuscular junction disorders



Nerve Conduction Study



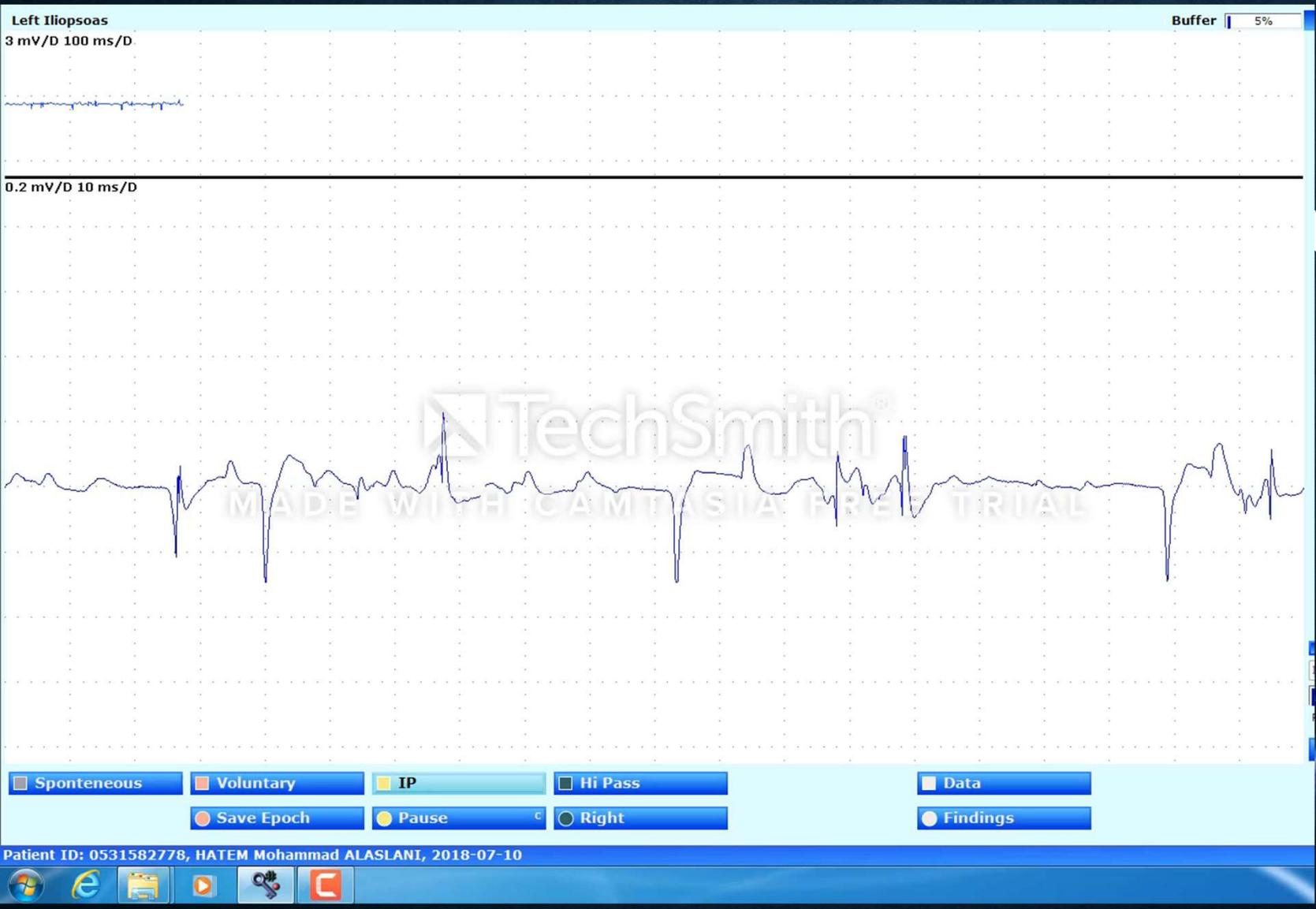
MNCS								
Nerve	Lat	Amp		Amp			CV	F-M Lat
	ms	Amp (mV)	Area (ms*mV)	Area (%)	Duration (ms)	Dur (%)	m/s	ms
Medianus Motor Left								
Wrist - APB	2.90	7.5	28.6		6.4			29.1
Elbow-Wrist	7.78	7.4	26.4	-7.7	6.3	-1.56	47.1	
Peroneus Motor Left								
Ankle - EDB	5.43	2.6	10.2		7.8			28.1
Distal FH-Ankle	13.0	2.2	8.0	-21.6	7.4	-5.1	43.6	
Prox FH-Distal FH	13.8	2.5	8.5	6.3	7.7	4.1	125	
Peroneus Motor Right								
Ankle - EDB	5.40	2.8	11.5		7.5			19.8
Distal FH-Ankle	12.8	2.3	10.4	-9.6	7.7	2.7	43.2	
Prox FH-Distal FH	14.9	2.4	10.6	1.92	7.5	-2.6	47.6	
Tibialis Motor Left								
Med. mal - Abd hal	3.77	8.7	19.2		5.5			42.4
Pop Fossa-Med. mal	12.1	8.2	20.2	5.2	5.8	5.5	49.2	
Tibialis Motor Right								
Med. mal - Abd hal	5.66	13.5	27.2		4.5			43.2
Pop Fossa-Med. mal	14.8	10.5	25.9	-4.8	5.2	15.6	46.0	
Ulnaris Motor Left								
Wrist - ADM	2.73	8.0	25.3		5.8			9.6
Bl. elbow-Wrist	7.09	8.2	21.9	-13.4	5.9	1.72	48.2	
Ab. elbow-Bl. elbow	8.89	8.0	23.9	9.1	6.4	8.5	55.6	

SNCS

Nerve	Peak Lat	Amp		CV
	ms	<u>uV</u>	Area	m/s
<u>Medianus Sensory Left</u>				
Wrist - Dig II	3.42	51.6		52.8
Wrist - Dig IV	3.63	33.8		47.5
<u>Peroneus superfic Sensory Left</u>				
Calf - Ankle	3.54	8.1		47.8
<u>Peroneus superfic Sensory Right</u>				
Calf - Ankle	3.50	12.5		49.1
<u>Suralis Sensory Left</u>				
Lateral Calf - Lat. Malleolus	3.31	13.8		52.0
<u>Suralis Sensory Right</u>				
Lateral Calf - Lat. Malleolus	3.71	16.5		49.1
<u>Ulnaris Sensory Left</u>				
Wrist - Dig IV	3.08	35.4		57.1
Wrist - Dig V	2.83	45.8		50.5

Electromyography





NEEDLE EMG LT ILIOPSOAS



Right Vastus lat Buffer 0%
3 mV/D 100 ms/D

0.2 mV/D 10 ms/D

TechSmith®
MADE WITH CAMTASIA FREE TRIAL

Spontaneous Voluntary IP Hi Pass Data

Save Epoch Pause Left Findings

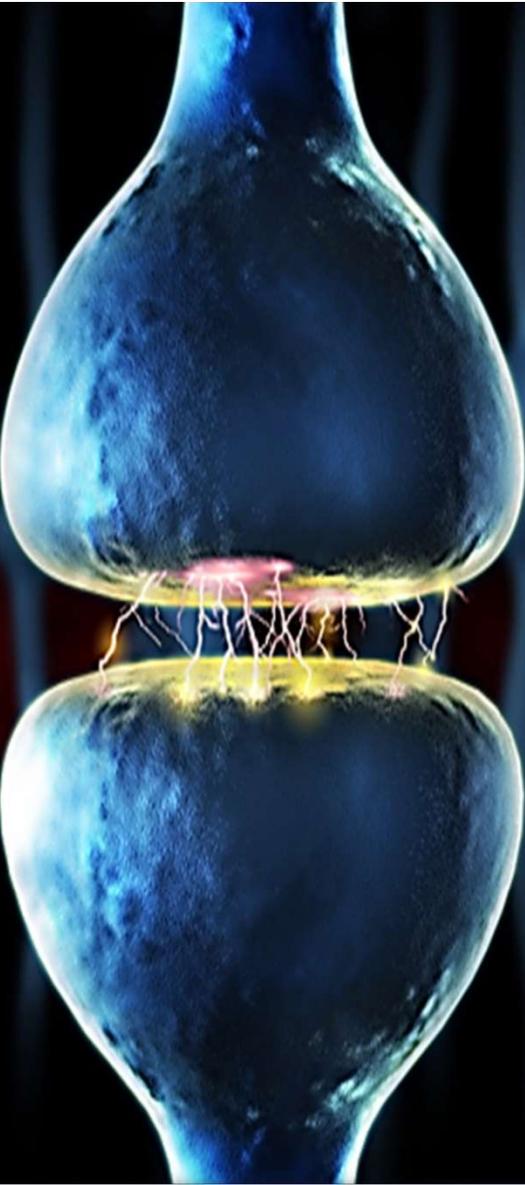
Patient ID: 0531582778, HATEM Mohammad ALASLANI, 2018-07-10



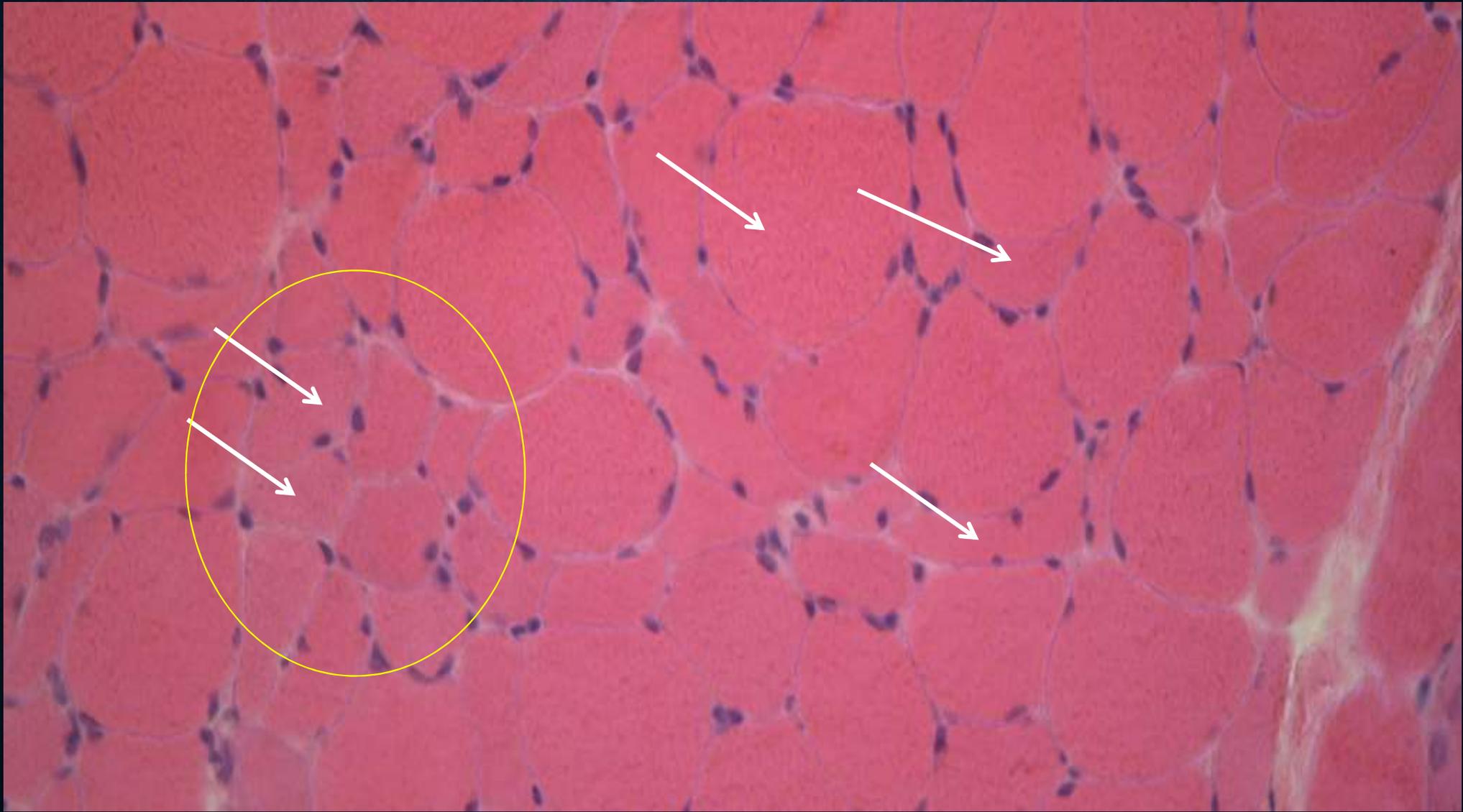
NEEDLE EMG LT VL

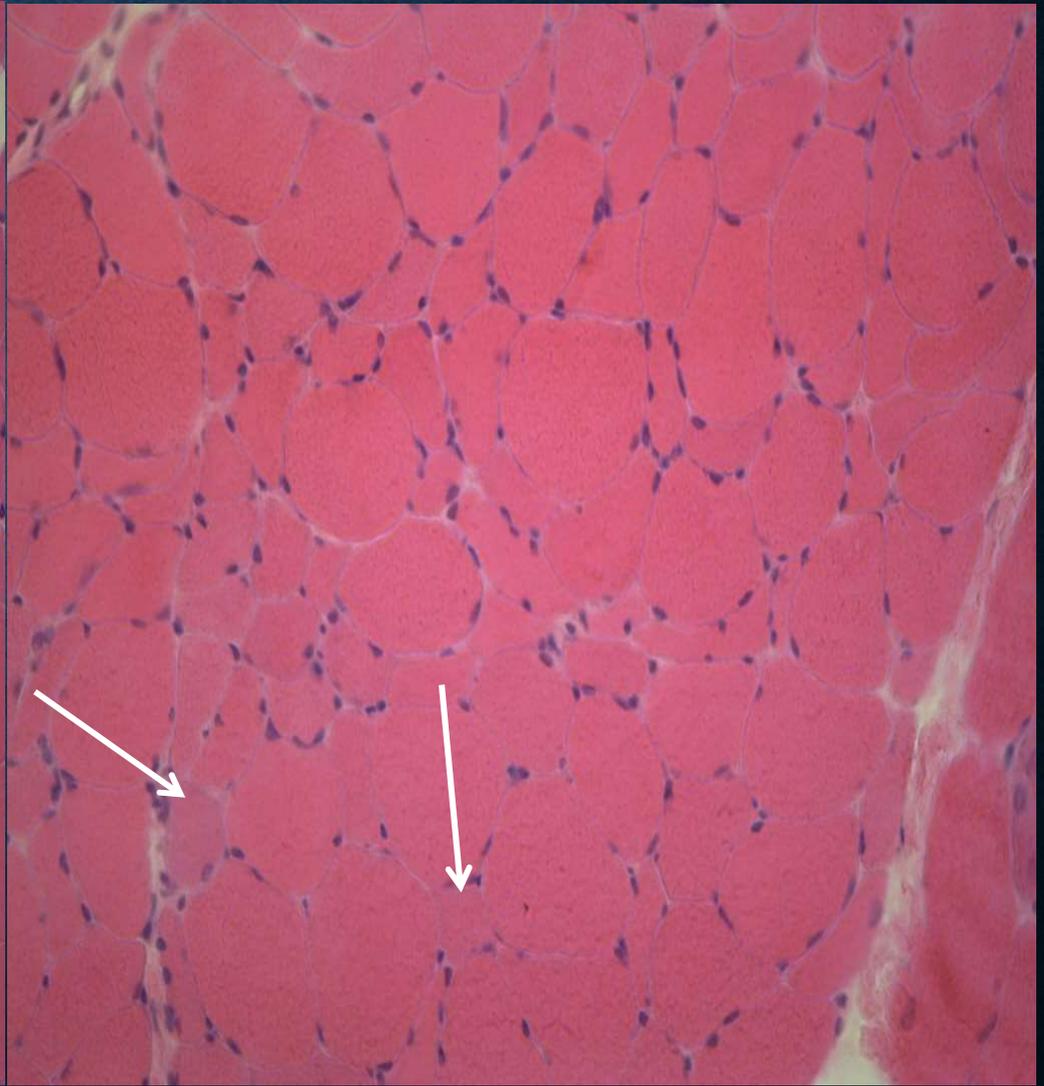
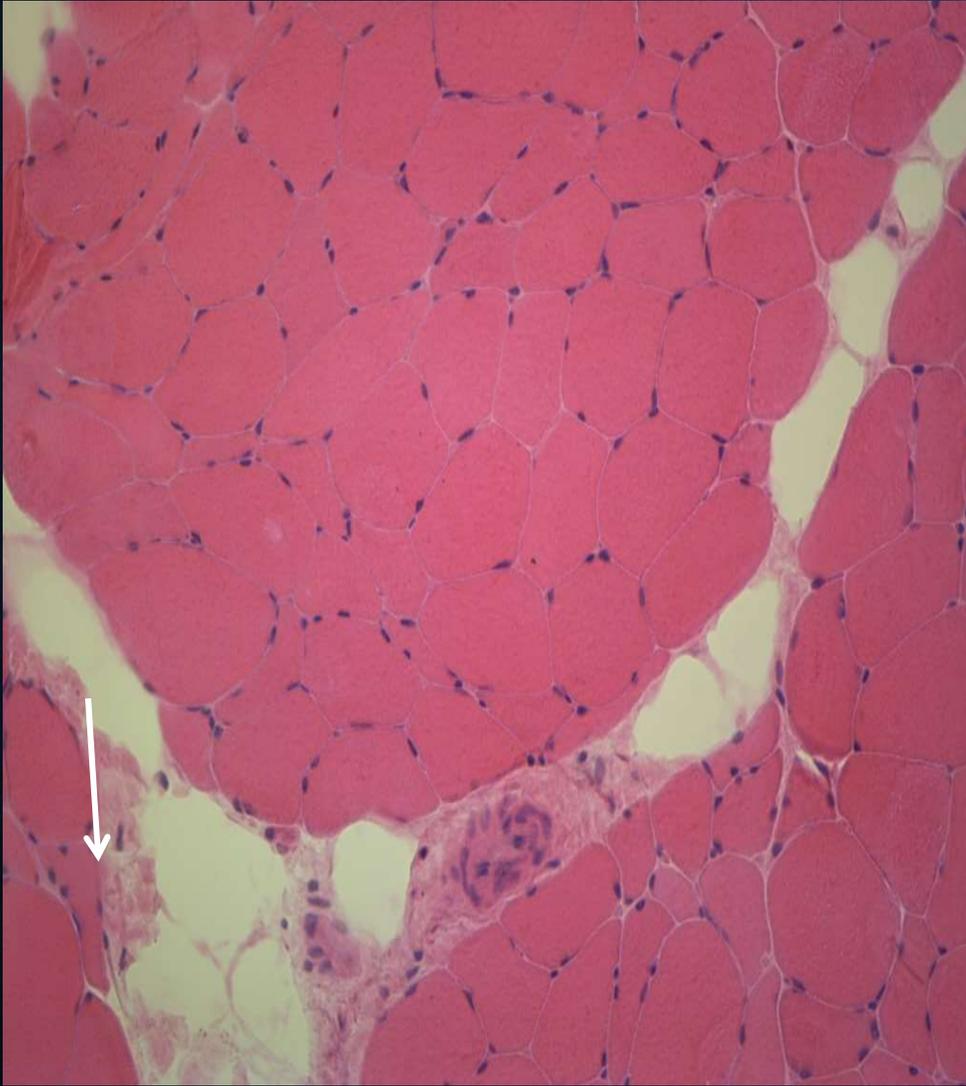


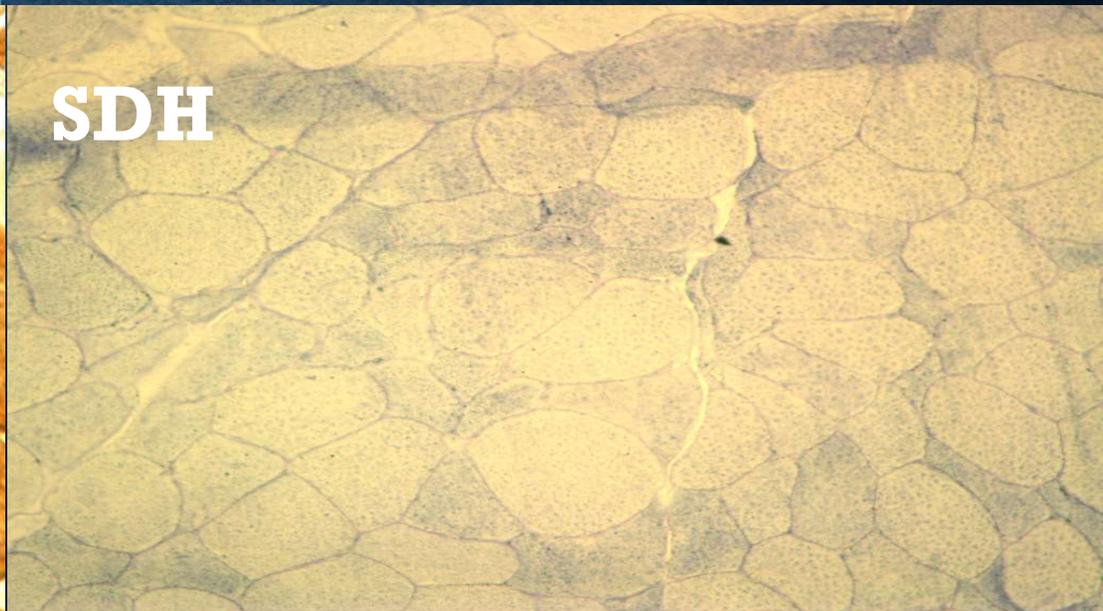
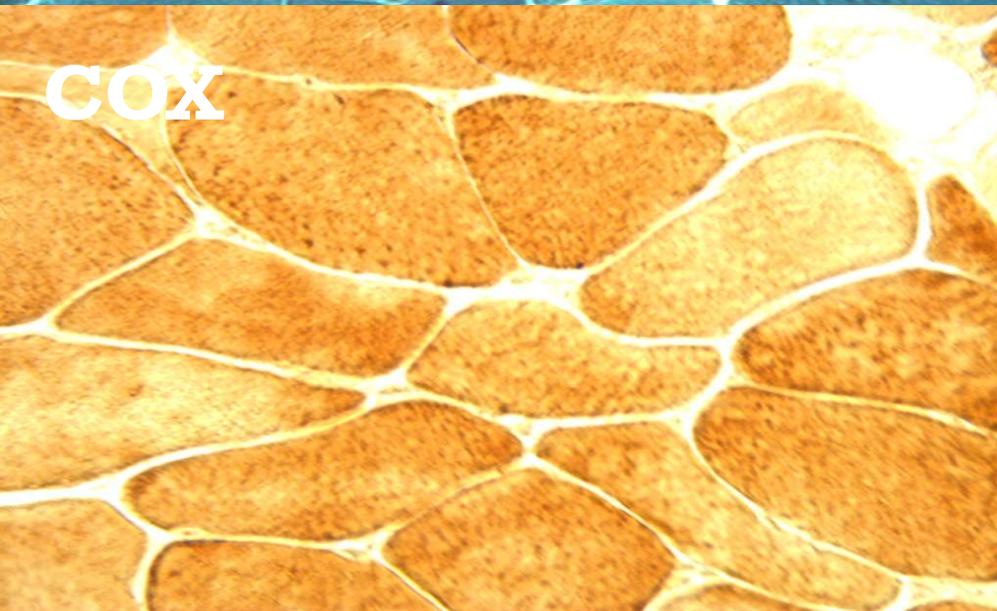
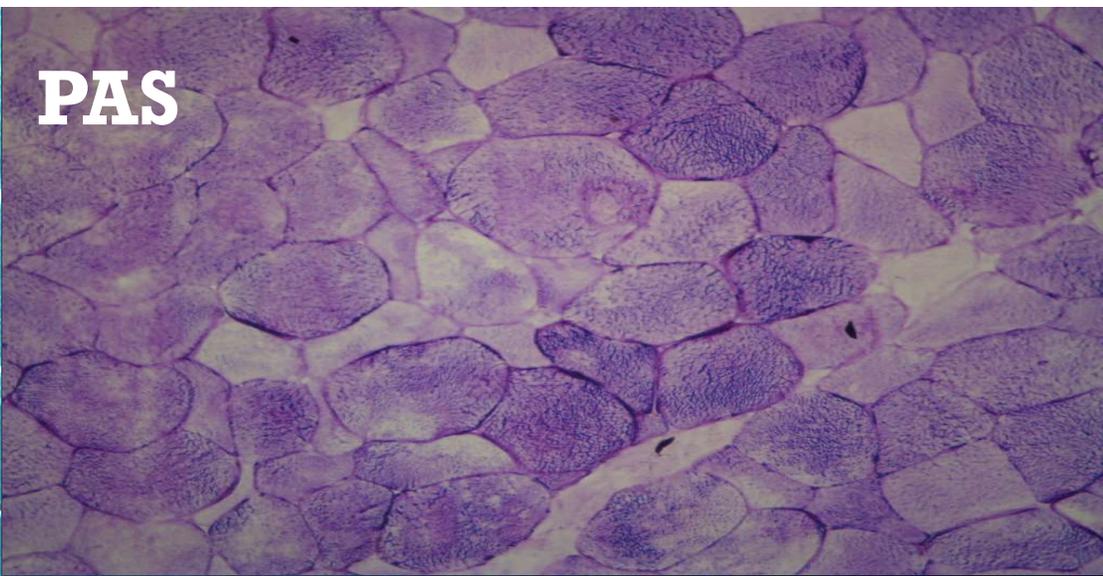
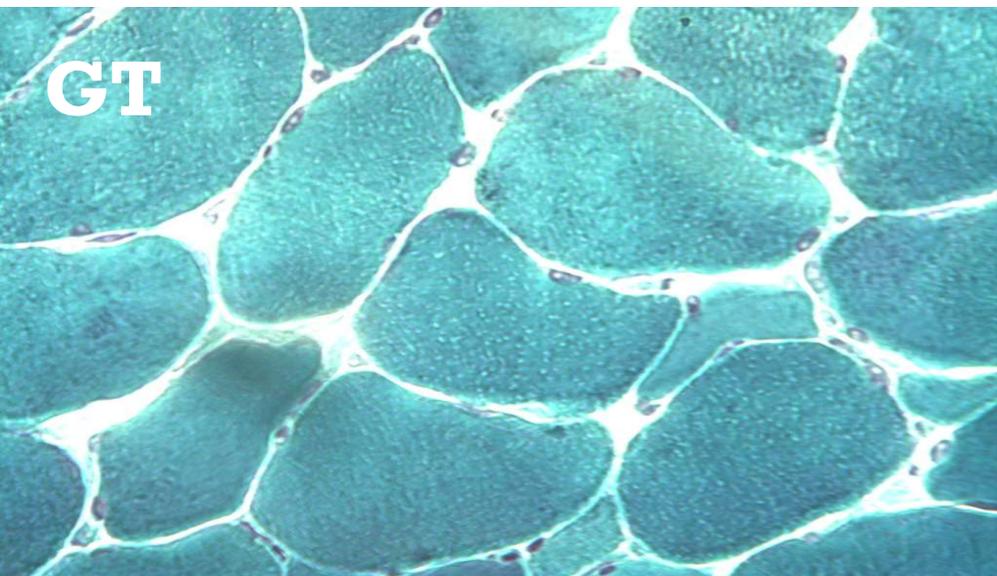
Muscle	Insertion Activity	Fib	PSW	Fasc	CRD	Amp	Dur	Poly	IP	Recruit	Firing
Left Triceps	Normal	No	0	0	0	Normal	Normal	Normal	Normal	Normal	Normal
Left Biceps	Normal	No	0	0	0	Normal	Normal	Normal	Normal	Normal	Normal
Left Tibialis anterior	Normal	No	0	0	0	Normal	Normal	Normal	Normal	Normal	Normal
Left Semitendinosus		1+	0	0	0	Normal	Normal	+	Normal	Early	Normal
Left Iliopsoas		1+	1+	0	0	Normal	-	+	Normal	Early	Normal
Right Semitendinosus	Normal	No	0	0	0	Normal	Normal	Normal	Normal	Normal	Normal
Right Iliopsoas		2+	2+	0	0	Normal	Normal	+	Normal	Early	Normal
Left Vastus lat	Normal	No	0	0	0	Normal	-	Normal	Normal	Early	Normal
Right Tibialis anterior		No	0	0	0	Normal	-	+	Normal	Normal	Normal

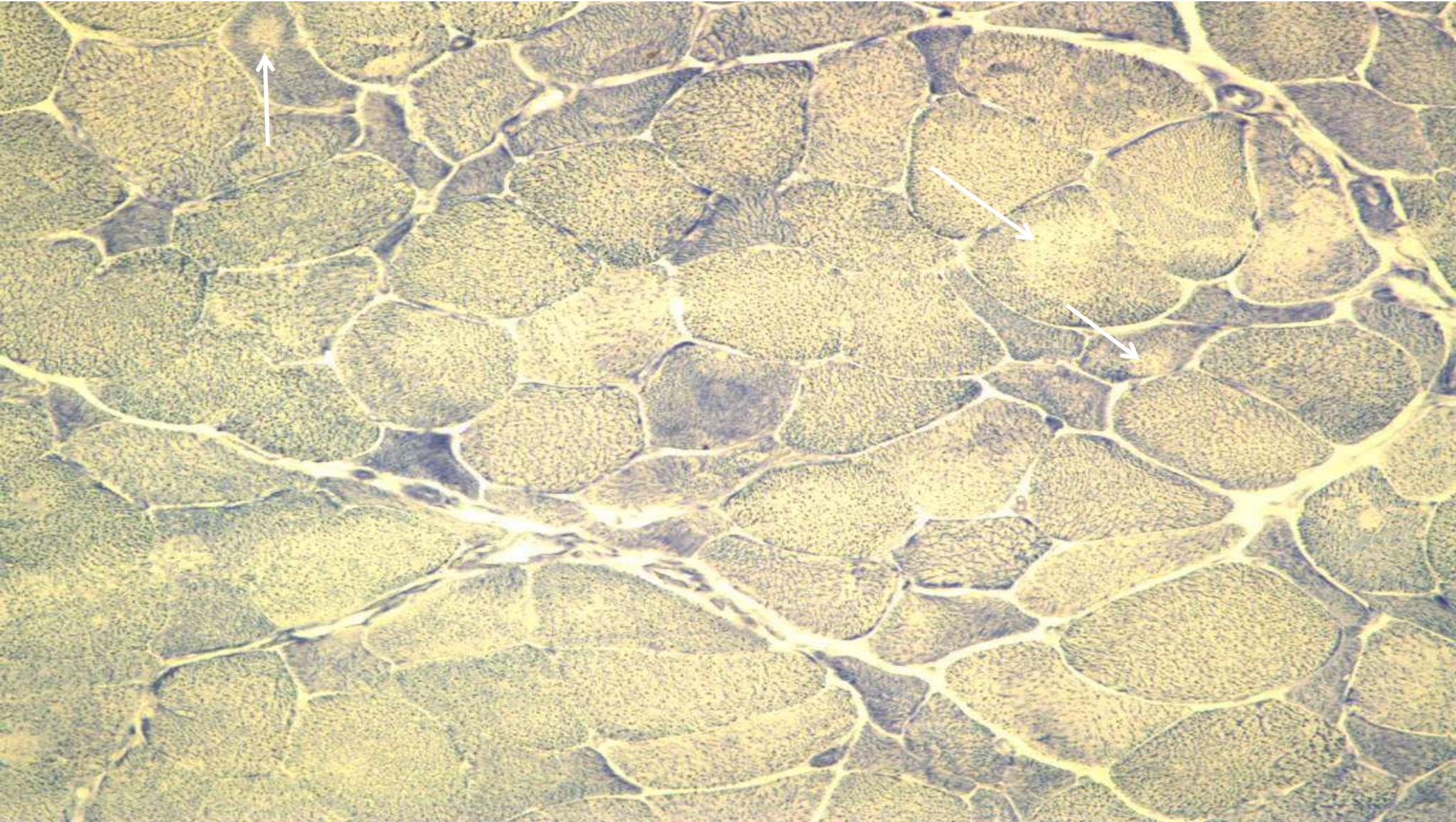


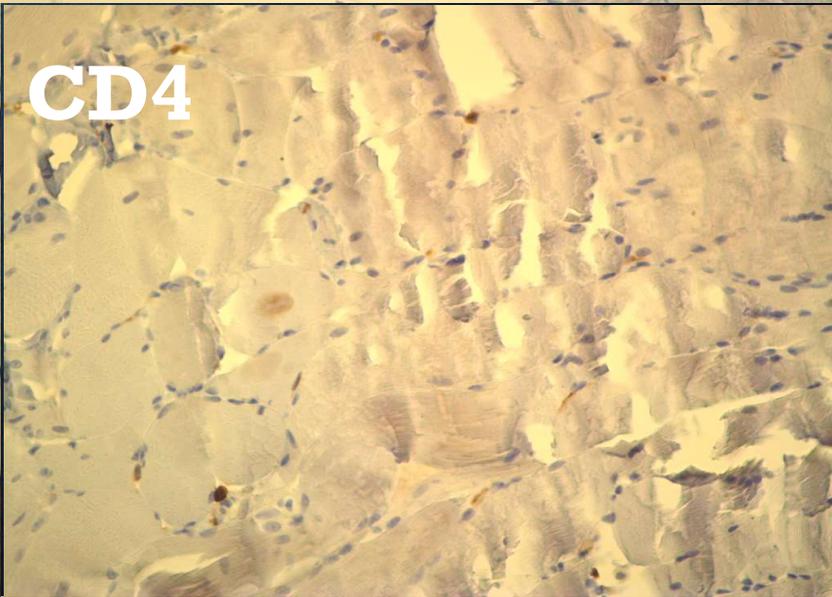
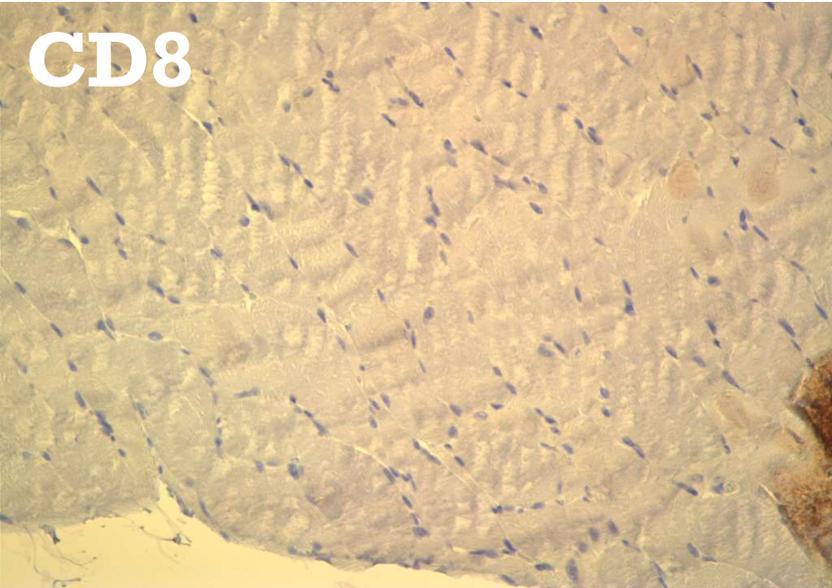
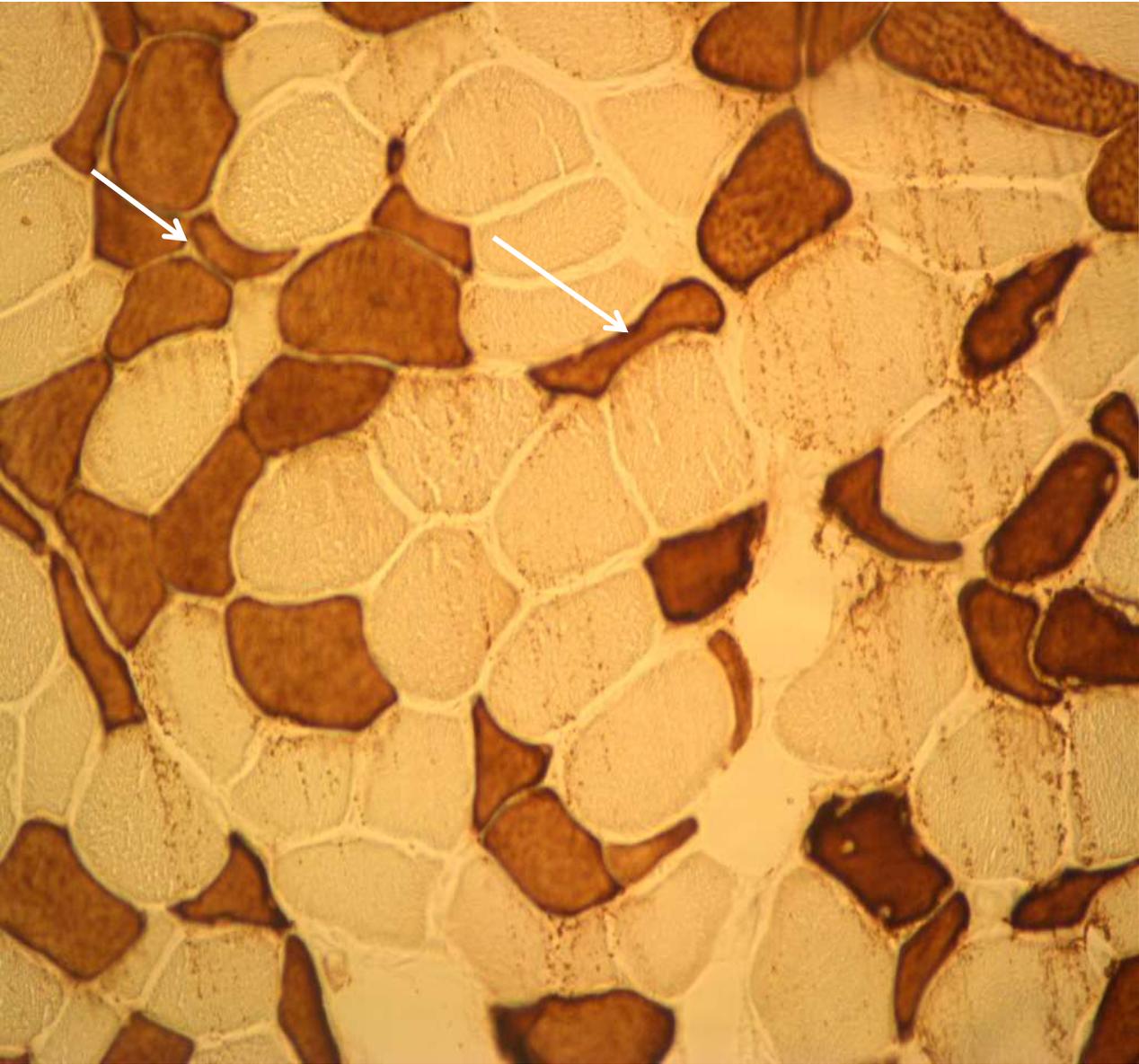
MUSCLE BIOPSY

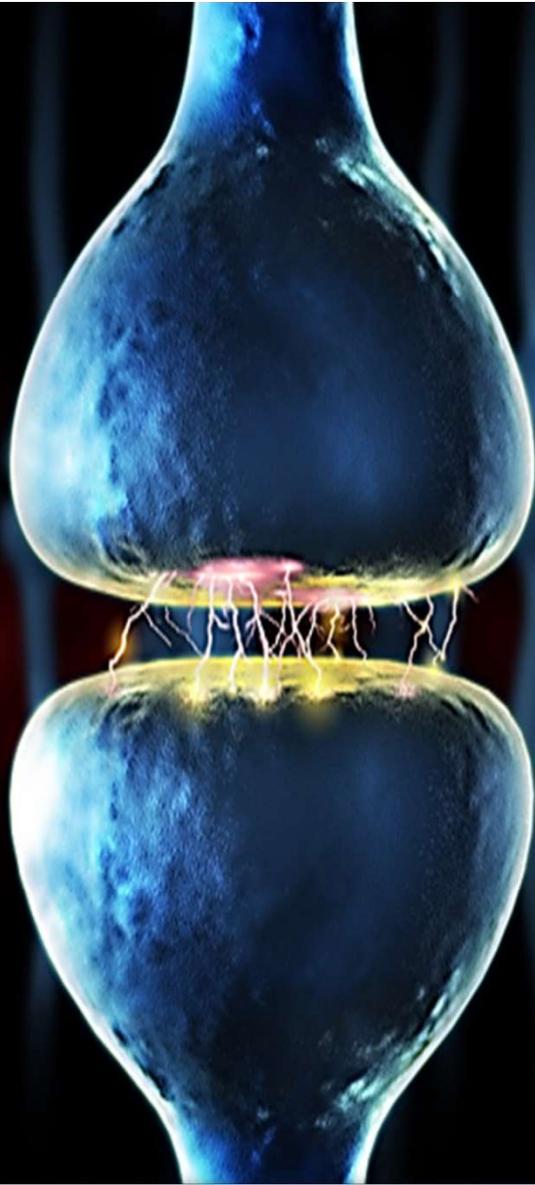












MRI BRAIN

NORMAL

An artistic illustration of a human spine, specifically the lumbar and sacral regions. The vertebrae are rendered in a dark blue, almost black, color with a glowing, ethereal quality. The intervertebral discs are highlighted in a bright yellow and orange, creating a strong contrast. The text 'MRI LUMBOSACRAL' is superimposed on the right side of the image in a stylized, golden font with a blue outline. The background is a dark, textured blue, suggesting a medical or scientific theme.

MRI LUMBOSACRAL

MRI LUMBOSACRAL SPINE

Sequence: *tse2d1_5
Slice: 3 mm
Dist: 3.9 mm
TR: 650
TE: 9.5
AC: 1

SIEMENS - Verio
MR03- MRI Verio
C: 400.0, W: 891
▲ Z

Sequence: *tse2d1_5
Slice: 3 mm
Dist: 3.9 mm
TR: 650
TE: 9.4
AC: 1

SIEMENS - Verio
MR03- MRI Verio 3
C: 301.0, W: 682.0
Contrast: Post Contrast
▲ Z R



Image 8 of 15

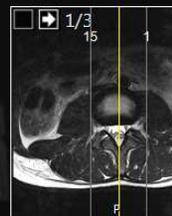
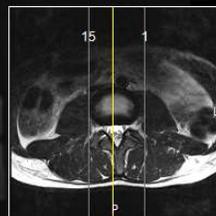


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JOE

Image no: 7
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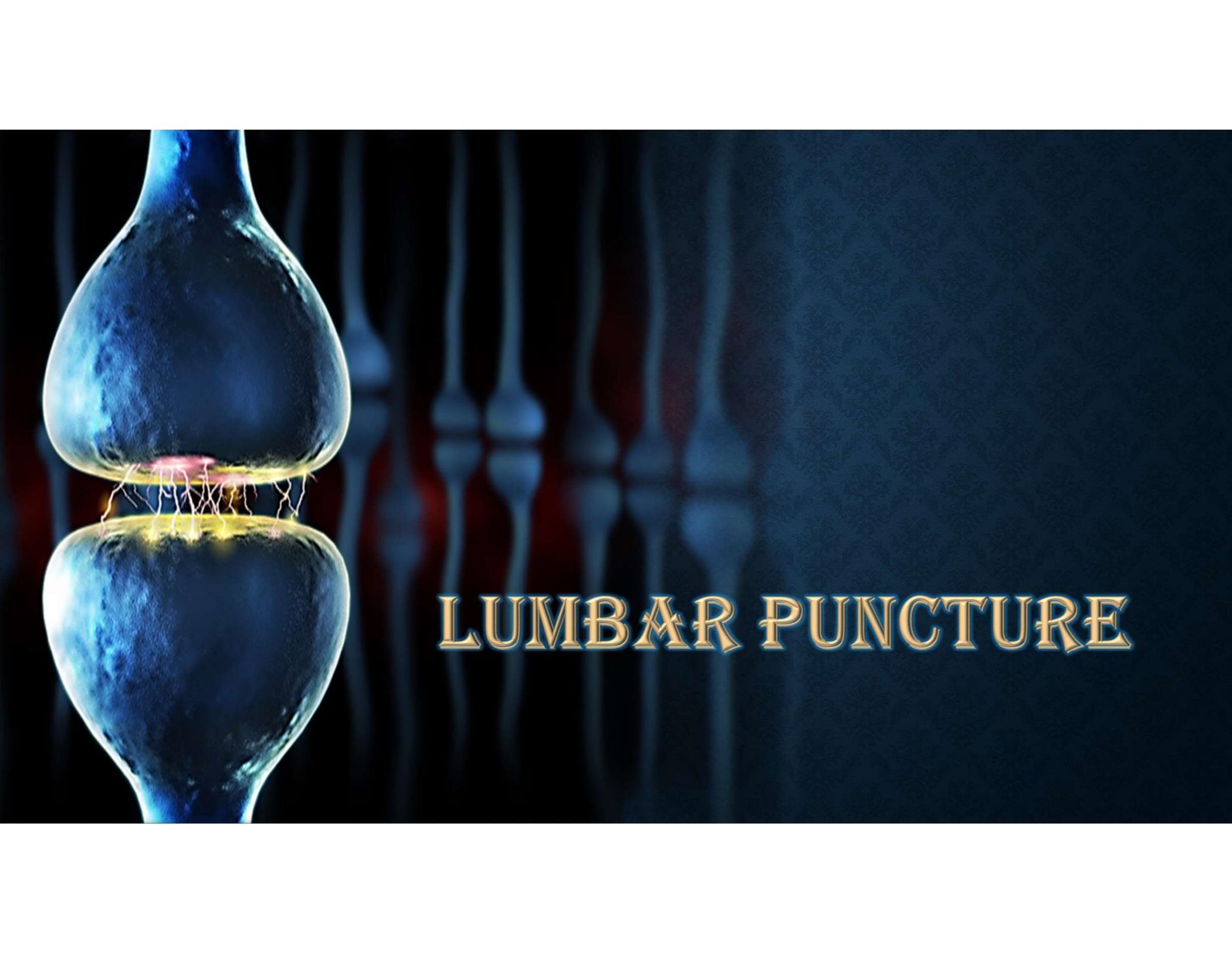
Image 9 of 15
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P

F

F

An anatomical illustration of a lumbar vertebra and intervertebral disc. The vertebra is shown in a dark blue, semi-transparent style, revealing the internal structure. The intervertebral disc is highlighted in a bright yellow and orange glow. A small, pinkish-red area is visible on the posterior surface of the vertebral body, indicating the site for a lumbar puncture. The background is dark blue with faint, repeating patterns of vertebrae and discs.

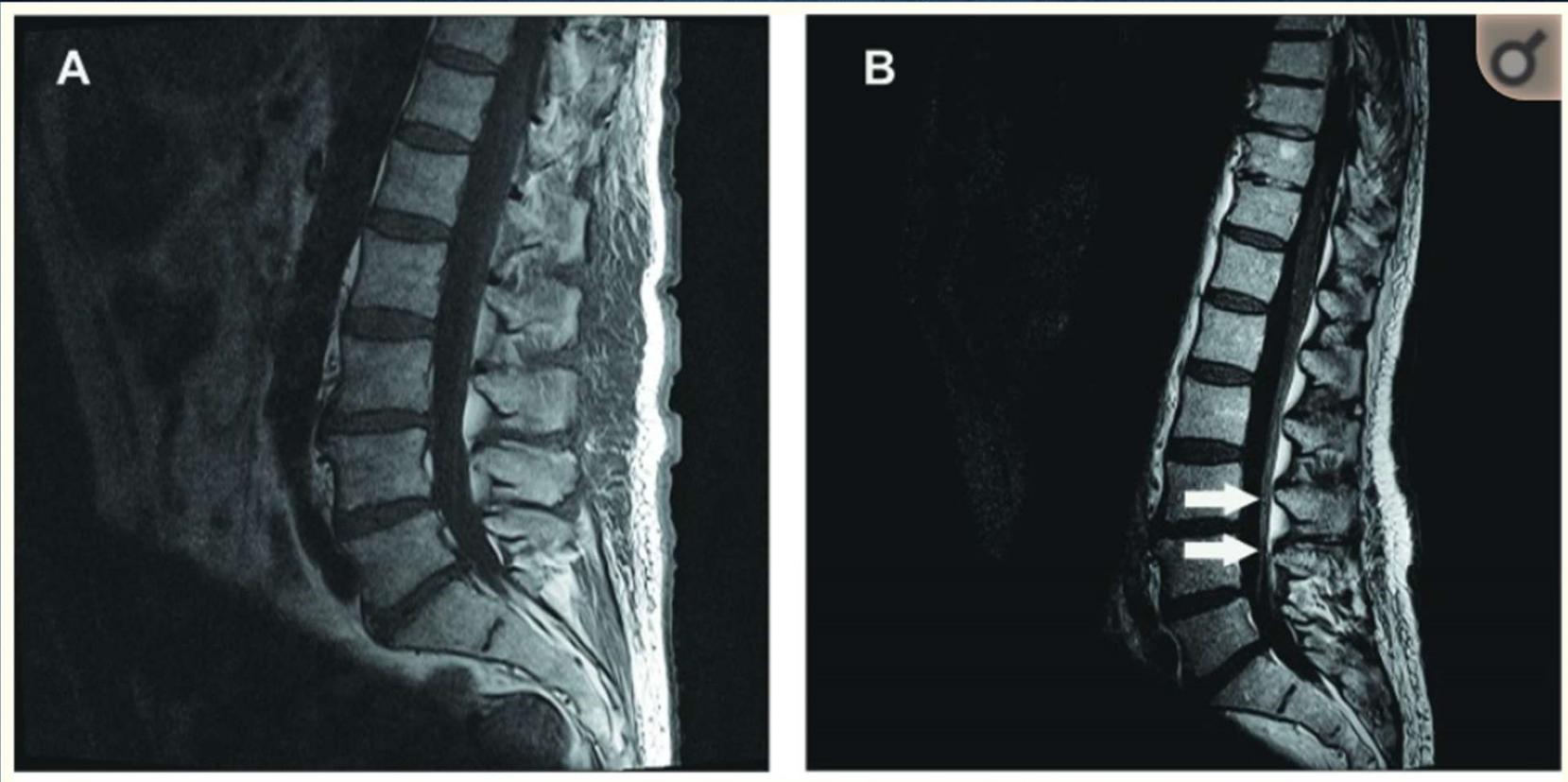
LUMBAR PUNCTURE

CSF RESULTS

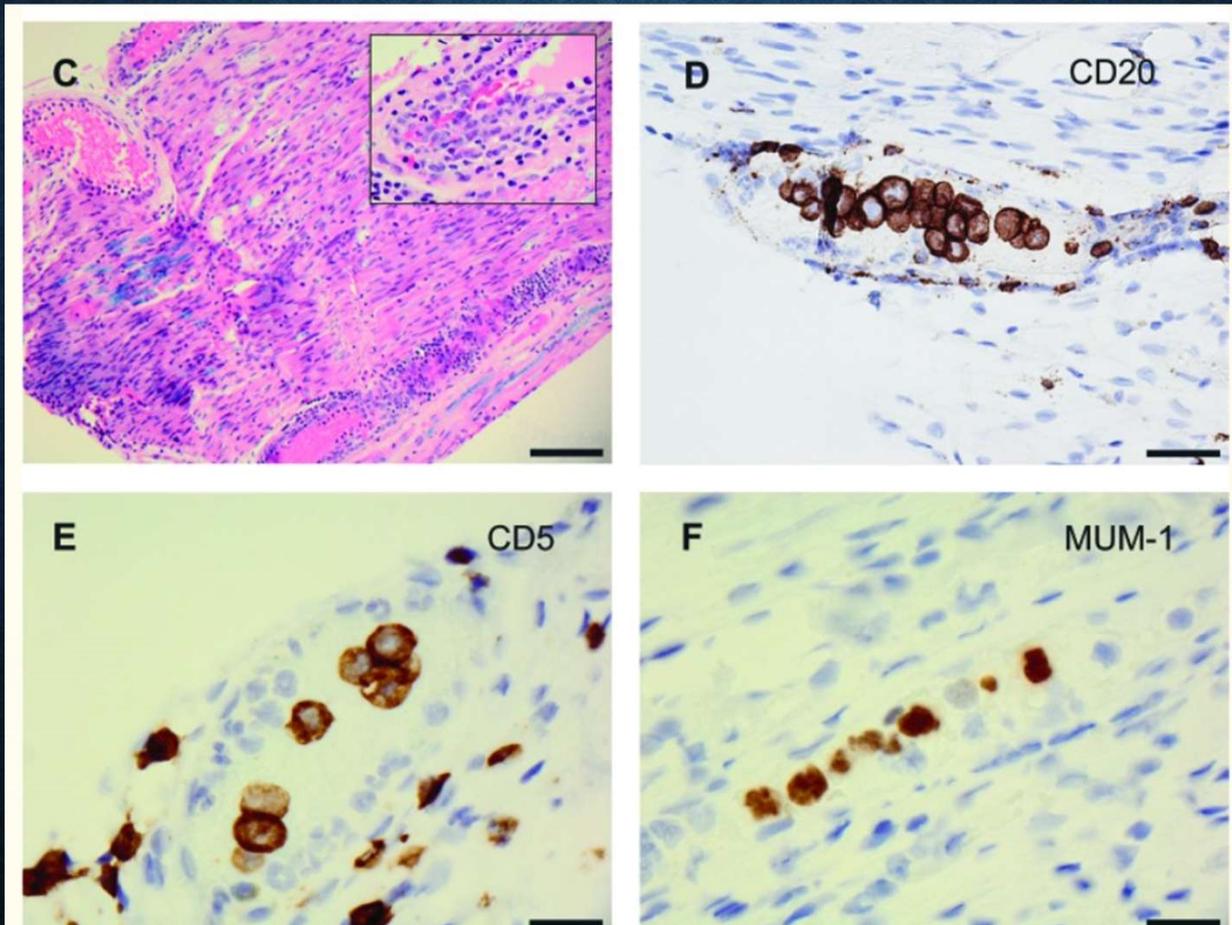
- CSF glucose 1.2
- CSF protein 2.74
- CSF WBCs 420, 90% lymphocytes and 4% polys
- CSF RBCs: 0
- Cultures were -ve for bacterial and fungal
- Cytology :
 - Many lymphocytes with atypia, in which low grade lymphoma cannot be excluded



OUR PATIENT MRI REMINDED ME ABOUT ANOTHER CASE I HAVE PUBLISHED



OUR PATIENT MRI REMINDED ME ABOUT ANOTHER CASE I HAVE PUBLISHED



WORK UP

- **Protein electrophoresis pattern:**
 - Hypergammaglobulinemia
 - No monoclonal bands were detected
 - Immunofixation is recommended



REPEATED CSF RESULTS

- CSF glucose 1.8
- CSF protein 1.89
- CSF WBCs 192, 87% lymphocytes and 6% polys
- Cultures were -ve for AFB, bacterial, fungal, and TB
- Cytology reported: few atypical lymphocytes



3RD REPEATED CSF RESULTS

- CSF glucose 1.3 CSF protein 3.73
- CSF WBCs 315, 45% lymphocytes and 41% polys
- Cultures were -ve for AFB
- Flow cytometry reported:
 - T-lymphocytes with some population with lost markers
- Cytology reported:
 - Abundenet mixed population of lymphocytes and histocytes
 - No malignant cells were seen





BLOOD TESTS

WORK UP

- **CBC:**
 - Mild neutropenia
 - Hb 12.9-13.9
- **U&E, LFTs, TFT, vitamin D, CK level and LDH:**
 - Unremarkable
- **ESR: 8**
- **CRP:S <3.13**
- **ANA profile: mild +ve (1:80) speckled pattern**
- **Double strand DNA antibody: 77.7 (within normal range)**
- **HIV, VDRL, hepatitis C-Ab and hepatitis B surface Ag: -ve**



THE DIAGNOSTIC TEST

- CSF sample culture reported as heavy brucella growth after 14 days period of incubation.

WORK UP

- Serum Brucella Melitensis antibody
 - 1:320 (Negative if <1:8)
- Serum Brucella Abortus antibody
 - 1:80 (Negative if <1:8)
- Serum brucella culture
 - -ve twice after 5 days of incubation
- Schistosoma antibody:
 - Negative





MANAGEMENT

- Doxycycline x1Y
- Rifampicin x1Y
- Amikacin x6w (IV, hospitalized)
- Ceftriaxone X6w (IV, hospitalized)

OUTCOME

- At the time of starting treatment:
 - Zero power in lower limbs muscle (no movement)
- Last clinic follow up:
 - Walking with cane





Saudi Neuromuscular Disease and Electrodiagnostic Medicine Conference SANEM2019

28th Feb - 2th March 2019
 Park Hyatt, Hotel
 Jeddah, Saudi Arabia

Up To
27
 CME Hours Requested

Basic & Advance EMG & Nerve Conduction Study Workshop

Online Registration

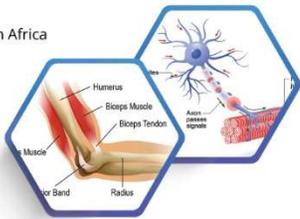
- Doctor- 400 SAR
- Student- 200 SAR
- Nursing - Technician - 200 SAR
- Workshop- 250 SAR

TARGET AUDIENCE :

- Adult Neurology
- Pediatric Neurology
- Neuromuscular Medicine
- Internal Medicine
- ICU and Critical Care Medicine
- Emergency Medicine
- Rehabilitation Medicine
- General Practitioner

Speakers From :

- Europe
- USA
- Gulf
- North Africa

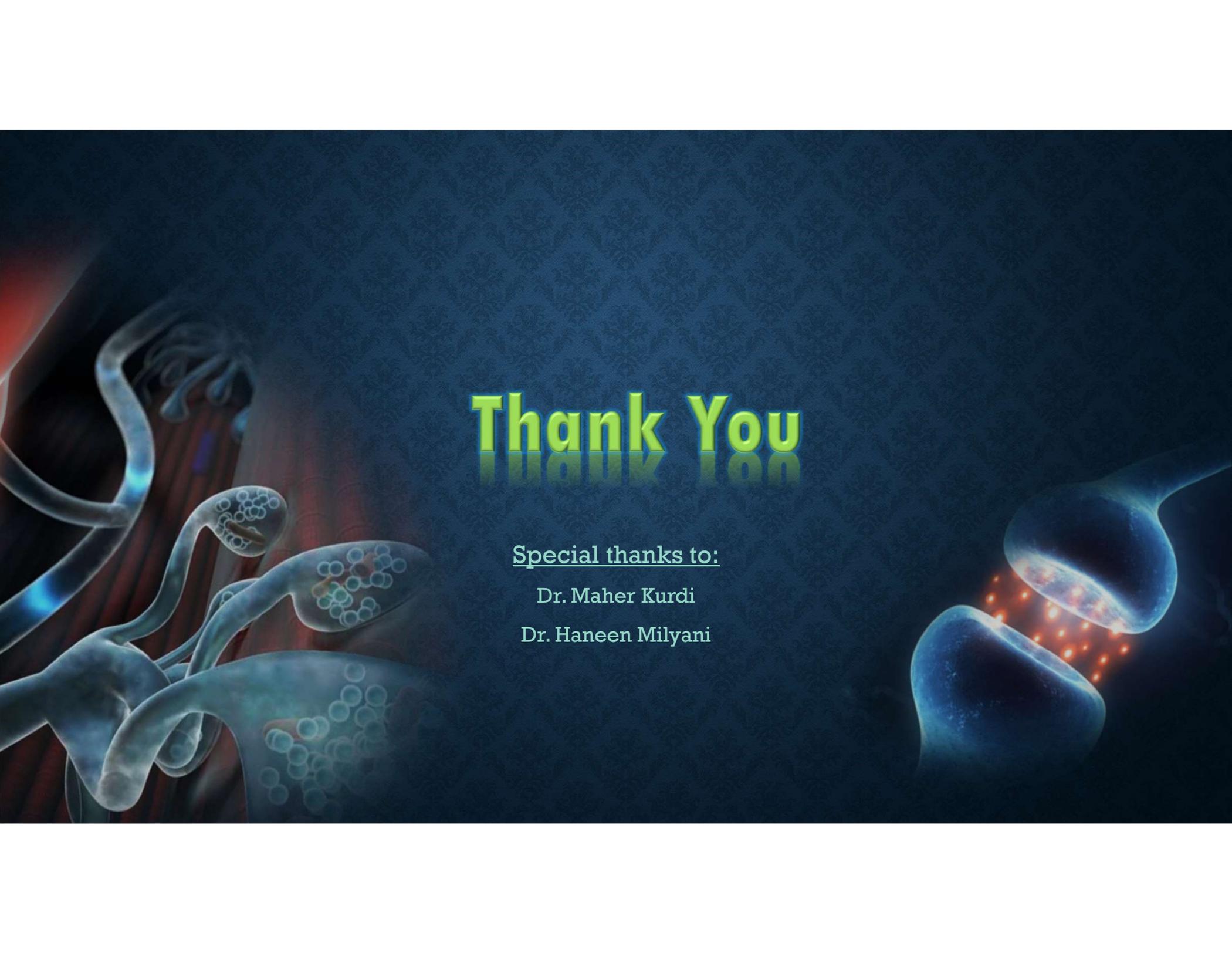


CALL FOR ABSTRACT

Last Call For Abstract 30 Jan. 2019
www.ndc2019.com

SANEM : Saudi association of neuromuscular and electrodiagnostic medicine.

SANEM meeting 2019: Jeddah Feb 28th- March 2nd



Thank You

Special thanks to:

Dr. Maher Kurdi

Dr. Haneen Milyani