



Canadian Academy of Sport and Exercise Medicine
Académie canadienne de la médecine du sport et de l'exercice

CASEM MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS

Saturday and Sunday
June 3rd and 4th 2017
University of Ottawa
Ottawa, ON

Preliminary Program
Limited Space Available!



MSK Ultrasound Planning Committee

Jonathan Halperin MD, Dip. Sport Med.

David Mai MD, CCFP (SEM), Dip. Sport Med.

Jon Jacobson MD



Dr. Jon A. Jacobson, MD

Jon A. Jacobson, MD is a Professor of Radiology and Director of the Division of Musculoskeletal Radiology in the Department of Radiology at the University of Michigan.

Dr. Jacobson earned his medical degree at Wayne State University and completed his diagnostic radiology residency in Detroit, Michigan. Following his Musculoskeletal Fellowship at University of California, San Diego, he joined the faculty at the University of Michigan in Ann Arbor, Michigan where he is a Professor of Radiology and Director of the Division of Musculoskeletal Radiology. Dr. Jacobson's research interests include musculoskeletal ultrasound and MRI. Dr. Jacobson academic achievements include over 160 peer-reviewed publications and over 900 invited national and international lectures or workshops. Dr. Jacobson has been a visiting professor on 29 occasions and is also active in various medical societies and reviews for several journals. Jon was recognized by the International Skeletal Society and awarded the President's Medal, and has received numerous teaching and mentoring awards from the residents at University of Michigan.

In 2008, Dr. Jacobson authored the reference book *Fundamentals of Musculoskeletal Ultrasound*, a volume in the *Fundamentals of Radiology* series, which is now in its second edition.



Dr. Jonathan Halperin MD

Board certified: Physical Medicine and Rehabilitation, Dip Sport Med CASEM; CAQ Sports Medicine ABMS, Sharp Rees Stealy Medical Group San Diego, CA, Medical School: Queens's University at Kingston, Ontario Canada, Residency: Loma Linda University Medical Center (PM&R), Team Physician: Canadian National Alpine and Para-alpine Ski Teams, Co-course director AAPMR lower limb MSK Ultrasound course.



Dr. David Mai MD

Dr. David Mai is a focused-practice physician in the field of sport and exercise medicine and assistant professor at the University of Ottawa with interest in diagnostic musculoskeletal and interventional pain management ultrasound techniques.

He is a fellowship trained in sports and exercise medicine physician who has practiced in Ottawa since 2003. He is currently the program director for the University of Ottawa Sports and Exercise Medicine Enhanced Skills Training Program. He has been the chief medical officer for many local, provincial national and international events locally and abroad. He currently provides medical care of the varsity athletes at the University of Ottawa and Canadian Men's Volleyball Team and the general public. He is also trained as an emergency medicine physician who has done ultrasound assessments in the emergency room and at major sporting events.

COURSE LOCATION

**The Ottawa Hospital, Civic Campus
Loeb Research Building – 1st floor**

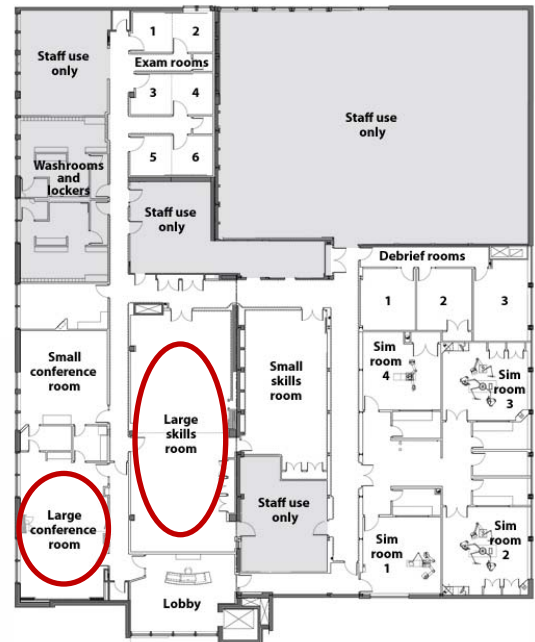
725 Parkdale Ave
Ottawa ON
K1Y 4E9

Google map link:

<https://goo.gl/maps/7Tt5Cspdtxq>



uOSSC Simulation Centre Map



MSK Ultrasound Teaching Faculty

Jon Halperin MD, Dip. Sport Med
Jon Jacobson MD
Meg Chiavaris MD
Tom Powell MD
Jeff Strakowski MD

MSK Ultrasound Lab Faculty

David Mai MD CCFP (SEM) Dip Sport Med
Taryn Taylor MD, CCFP (SEM), Dip. Sport Med.
Rose Martel MD, CCFP (SEM), Dip. Sport Med.

Declaration of Potential Conflicts of Interest

Speakers will be requested to disclose to the audience any real or apparent conflict(s) of interest that may have a direct bearing of the subject matter of this program.

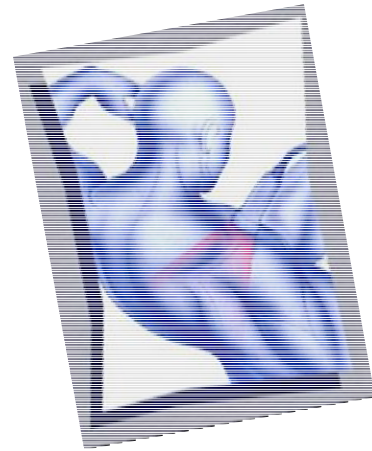
Accreditation Criteria

For CME credit status please contact the executive director Dawn Haworth at dhaworth@casem-acmse.org

MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS- Learning Objectives (1)

MSK US Image Optimization and Knobology

- Understand the relationship between transducer frequency and depth of ultrasound wave tissue penetration
- Be able to demonstrate the use of gain, depth, frequency and focal zone settings to optimize an ultrasound image
- Identify the unique tissue signature echotexture of muscle, nerve bone and tendon



Live Demonstration of Shoulder MSK Ultrasound

- Demonstrate the systematic protocol used to examine the shoulder using MSK ultrasound
- Understand how to optimize transducer position to minimize anisotropy of the shoulder rotator cuff tendons
- Be able to describe the technique used to examine the rotator cuff tendons in short and long axis views

Shoulder Pathology as Seen on Ultrasound with MRI Correlation

- Understand the pros and cons of ultrasound versus MRI imaging of the shoulder and rotator cuff
- Be able to describe the ultrasound features of a shoulder joint effusion on both MRI and ultrasound imaging
- Understand the MSK ultrasound features of rotator cuff tendinopathy

Live Demonstration of Elbow MSK Ultrasound

- Be able to identify the following structures in the elbow using MSK ultrasound: Medial humeral condyle, Lateral humeral condyle, radio-capitellar joint and olecranon fossa
- Demonstrate the techniques used to identify the biceps tendon origin into the radial head
- Understand the technique used to examine the ulnar nerve at the medial elbow joint

Elbow Pathology as Seen on Ultrasound with MRI Correlation

- Understand the radiographic features of lateral epicondylitis on MRI and Ultrasound exam
- Be able to describe the radiographic features of an elbow joint effusion of both MRI and ultrasound imaging
- Discuss the advantage of the use of dynamic ultrasound imaging to demonstrate ulnar nerve subluxation

Live Demonstration of Wrist/Hand Ultrasound

- Understand the correct transducer position to evaluate the six dorsal compartments of the wrist and hand
- Be able to describe the contents of the carpal tunnel as seen in the short axis view on ultrasound
- Demonstrate the ultrasound features of the distal radio-ulnar joint and the CMC joint

Wrist/Hand Pathology as Seen on US with MRI Correlation

- Be able to describe the radiographic features of compressive median neuropathy of the wrist (Ultrasound and MRI)
- Understand the advantages of MRI over ultrasound in imaging the TFCC complex
- Describe the ultrasound features of DeQuervain's tenosynovitis



MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS- Learning Objectives (2)

Shoulder Hands on Exam Hands on with Models

- Understand which rotator cuff tendons insert into the greater and lesser tuberosity of the humerus
- Demonstrate how to examine for biceps tendon subluxation at the proximal humerus
- Recognize the ultrasound features of the posterior glenohumeral joint

Elbow Exam Hands on with Models

- Demonstrate the ultrasound appearance of the lateral elbow structures: lateral humeral condyle; extensor mass; radial nerve
- Recognize how to look for an elbow joint effusion
- Demonstrate the technique to look for ulnar nerve subluxation



Wrist/Hand Exam Hands on with Models

- Demonstrate the anatomic borders of the carpal tunnel in the short axis view
- Recognize the features of the flexor pulley system as seen on MSK ultrasound
- Explain the importance of Lister's tubercle to identify the six dorsal compartments of the wrist

Principals of MSK Ultrasound Guided Injections

- Be able to discuss the advantages of the short axis versus long axis technique of needle visualization
- Understand the use of Ultrasound image settings to optimize the position of the needle tip for ultrasound guided injections
- Be able to describe the techniques used to inject a deep versus a superficial ultrasound target

Ultrasound Guided Procedures of the Shoulder

- Describe the techniques used to perform an ultrasound guided shoulder joint injection
- Understand the different techniques used to inject the subacromial/subdeltoid bursa
- Be able to describe the technique used to ballot a large calcific deposit in the subacromial bursa using ultrasound guidance

Ultrasound Guided Procedures of the Elbow

- Describe the two techniques used to inject or aspirate the elbow joint using ultrasound guidance
- Understand the advantages of performing a lateral extensor tendon mass tendon fenestration versus a blind injection
- Be able to describe the technique of injecting the triceps tendon insertion using ultrasound guidance

Ultrasound Guided Procedures of the Wrist/Hand

- Be able to describe the use of ultrasound guidance to perform a carpal tunnel injection
- Understand the technique used to inject the first dorsal compartment using ultrasound guidance
- Be able to demonstrate the ultrasound guided techniques for treating stenosing tenosynovitis (trigger finger) of the hand





CASEM MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS
Ottawa, ON—June 3-4, 2017

MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS
SATURDAY, JUNE 3rd, 2017

*****Please note that this course is intended for those who have already completed a CASEM Basic MSK ultrasound course previously. *****

08:00-09:00	Registration and Breakfast
09:00-09:10	Welcome and Course Overview
09:10-09:30	Live Demonstration of MSK US Image Optimization and Knobology
09:30-09:50	Live Demonstration of Shoulder MSK Ultrasound
09:50-10:20	Shoulder Pathology as Seen on Ultrasound with MRI Correlation
10:20-10:40	Q & A/ BREAK
10:40-11:00	Live Demonstration of Elbow MSK Ultrasound
11:00-11:20	Elbow pathology as seen on Ultrasound with MRI Correlation
11:20-11:40	Live Demonstration of Wrist/Hand Ultrasound
11:40-12:00	Wrist/Hand Pathology as Seen on US with MRI Correlation
12:00-13:00	LUNCH
13:00--16:00	Hands on sessions
1:00-2:00	Shoulder Hands on Exam Hands on with Models
2:00-3:00	Elbow Exam Hands on with Models
3:00-4:00	Wrist/Hand Exam Hands on with Models

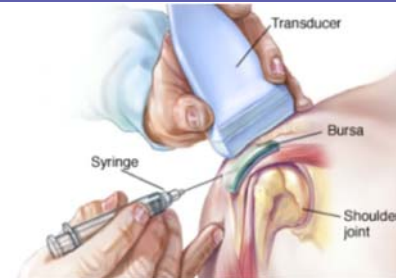




CASEM MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS
Ottawa, ON—June 3-4, 2017

MSK UPPER LIMB ULTRASOUND GUIDED INJECTIONS
SUNDAY, June 4th, 2017

- 07:00-07:45 **Registration and Breakfast**
- 07:45-08:00 **Day two Course Overview and Logistics**
- 08:00-08:30 **Principals of MSK Ultrasound Guided Injections**
- 08:30-09:00 **Ultrasound Guided Procedures of the Shoulder**
- 09:00-09:30 **Ultrasound Guided Procedures of the Elbow**
- 09:30-10:00 **Ultrasound Guided Procedures of the Wrist/Hand**
- 10:00-10:30 **BREAK/ Q & A**
- 10:30-11:30 **Nerve Entrapment Syndromes in the Upper Limb and Ultrasound Guided Injections of the Upper Limb**
- 11:30-12:30 **LUNCH**
- 12:30-14:30 **Lab Session one**
- 14:30-15:00 **BREAK**
- 13:30-15:30 **Lab session two**



Six stations in the lab/ forty minutes per station

- Station 1: Glenohumeral and SASD injection
- Station 2: A/C Injection and Biceps Tendon Injection
- Station 3: Elbow Joint Injections and Nerve Injections
- Station 4: Medial and Lateral Humeral Condyle Injection
- Station 5: Carpal Tunnel Injection and First Dorsal Compartment Injection
- Station 6: Trigger Finger Injection, Wrist Joint Injection, CMC Injection



REGISTRATION FORM
CASEM MSK UPPER LIMB ULTRASOUND
GUIDED INJECTIONS
Ottawa, ON—June 3-4, 2017

****Please note that this course is intended for those who have already completed a CASEM Basic MSK ultrasound course previously. ****

COURSE REGISTRATION FEE

(Please circle an option)

Early Bird Rate ends March 31st

CASEM Member

\$ 1000.00 CDN

Non Members

\$ 1300.00 CDN

First & Last Name _____

Address _____

Address _____

Postal Code _____

E-mail Address _____

Tel. _____

Method of payment (please circle)

Credit Card VISA _____ M/C _____ Cheque included _____

Credit Card Number _____

Expiry Date m/y _____

Signature _____

Please complete the form and send to cpd@casem-acmse.org or by fax at 613-912-0128

CANCELLATION POLICY

A \$100.00 CDN cancellation fee will apply to all reimbursements issued prior to January 31st 2017. After this date no refunds will be issued.

Please complete the registration form with a method of payment and return to:

CANADIAN ACADEMY OF SPORT AND EXERCISE MEDICINE

55 Metcalfe Street, Suite 300, Ottawa, ON K1P 6L5

Tel: 613-748-5851 Fax: 613-912-0128

www.casem-acmse.org

**** Please note that CASEM/ ACMSE reserves the right to cancel the course due to low enrollment. ****