

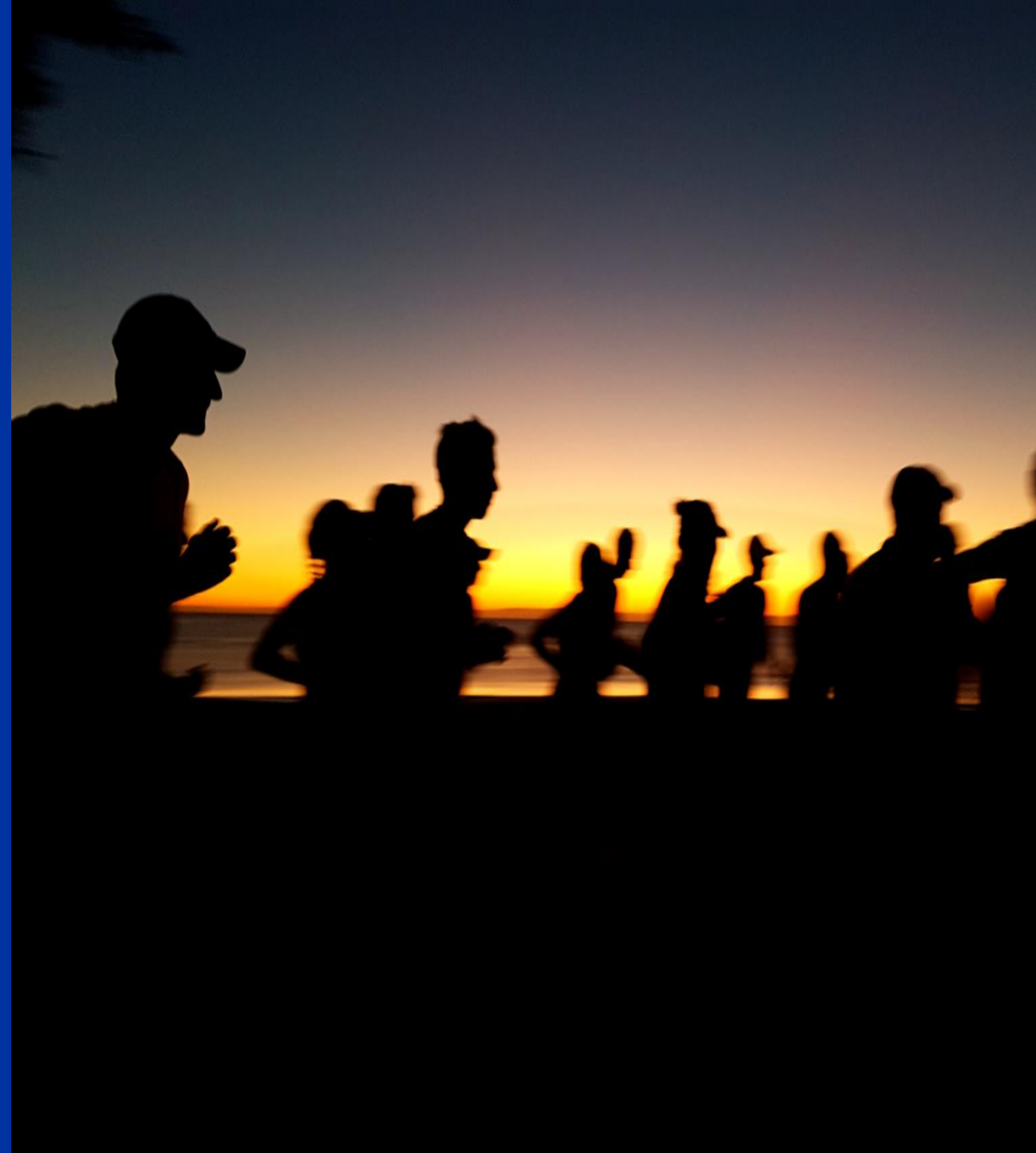
GP Club: Musculoskeletal

DR JONATHAN KING
SPORT & EXERCISE PHYSICIAN

2 March 2023

Cnr George & Minton St, East Gosford, NSW, 2250
02 4324 1849

WE ACKNOWLEDGE THE TRADITIONAL OWNERS & CUSTODIANS OF THE
LAND THAT WE LIVE & WORK ON AS THE FIRST PEOPLE OF THIS COUNTRY.

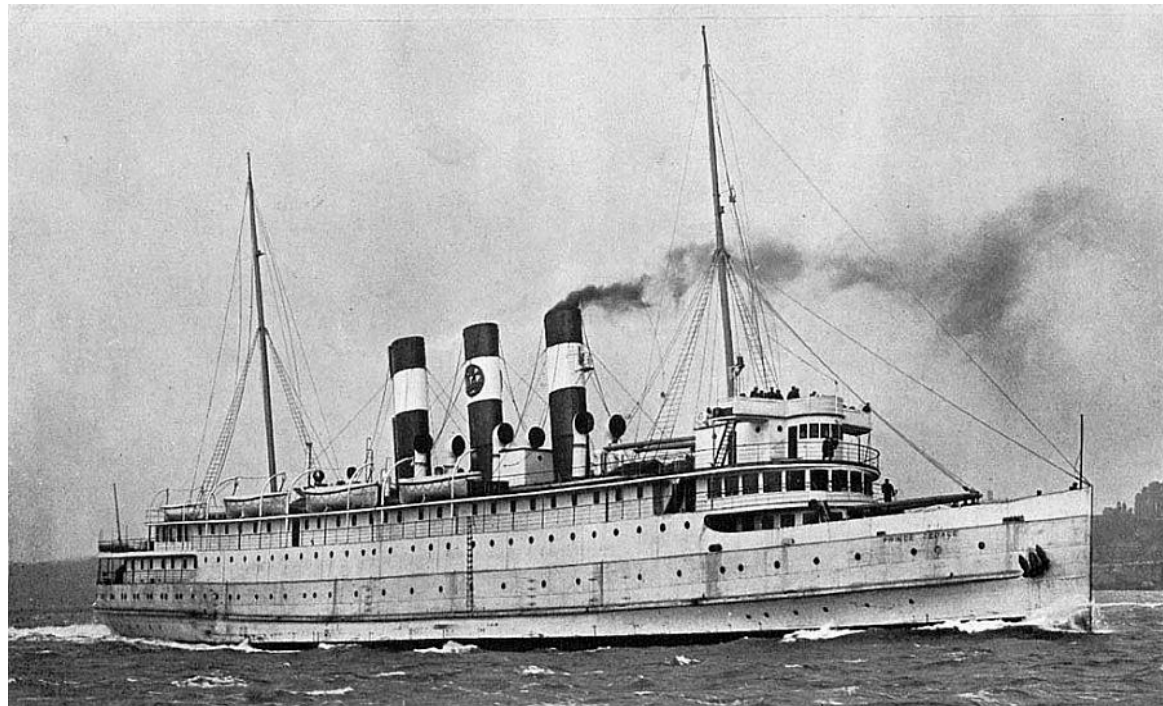


GP CLUB: MUSCULOSKELETAL 2 March 2023

TIME	ITEM	PRESENTER
6:00 – 6:30	Auditorium: Informal Networking & Dinner	ALL
6:30 – 6:32	Auditorium: Welcome, Acknowledgement of Country, Slido, Introduction of Georgia	Sydney Cruikshank
6:32-6:35	Auditorium: GP Welcome, Brief overview of session and introduction of presenter	Dr Georgia Page
6:35 – 7:05	Auditorium: Main Presentation	Dr Jonathan King
7:05 – 8.20	<p align="center">Introduction of Physio's</p> <p align="center">BREAKOUT ROOMS: Divide into groups to rotate through 3 skills stations</p> <p align="center">(20 minutes each, 5 minute rotation)</p> <p align="center">Station 1: Shoulder Auditorium</p> <p align="center">Station 2: Lower Back Pain/SIJ/Hip Conference Room</p> <p align="center">Station 3: Foot/Ankle Seminar Room 2</p>	<p align="center">Dr Georgia Page</p> <p align="center">Russell Tuckerman ●</p> <p align="center">Andrew Nealon ●</p> <p align="center">Russell Wright ●</p>
8:20 – 8:30	Auditorium: Evaluation, Lucky Door Prizes & Session Close	Dr Georgia Page & Sydney Cruikshank

HOW DID I GET HERE?

Grandfathers left Canton for South Africa 1910's.

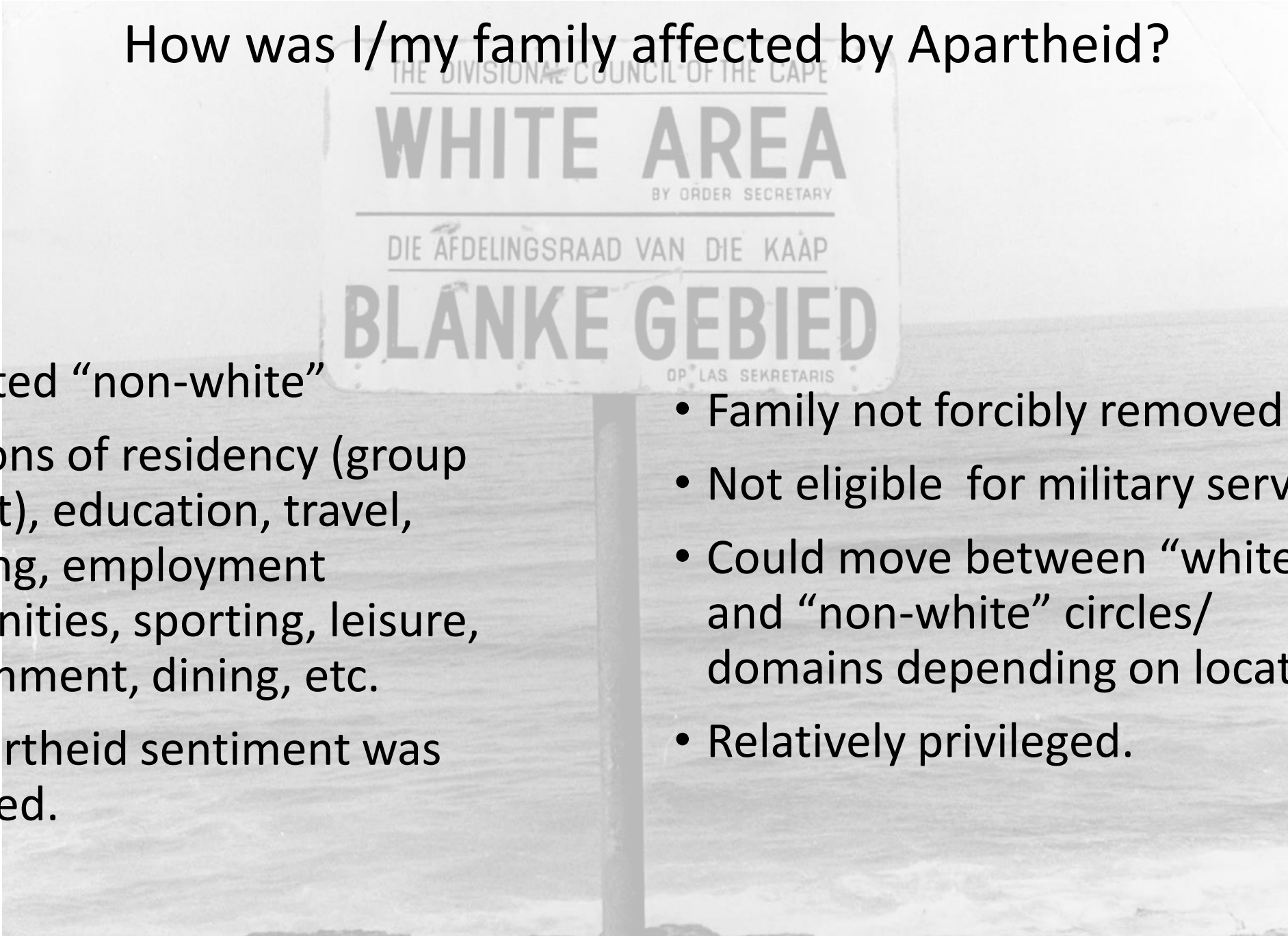


Decisions that changed the future.

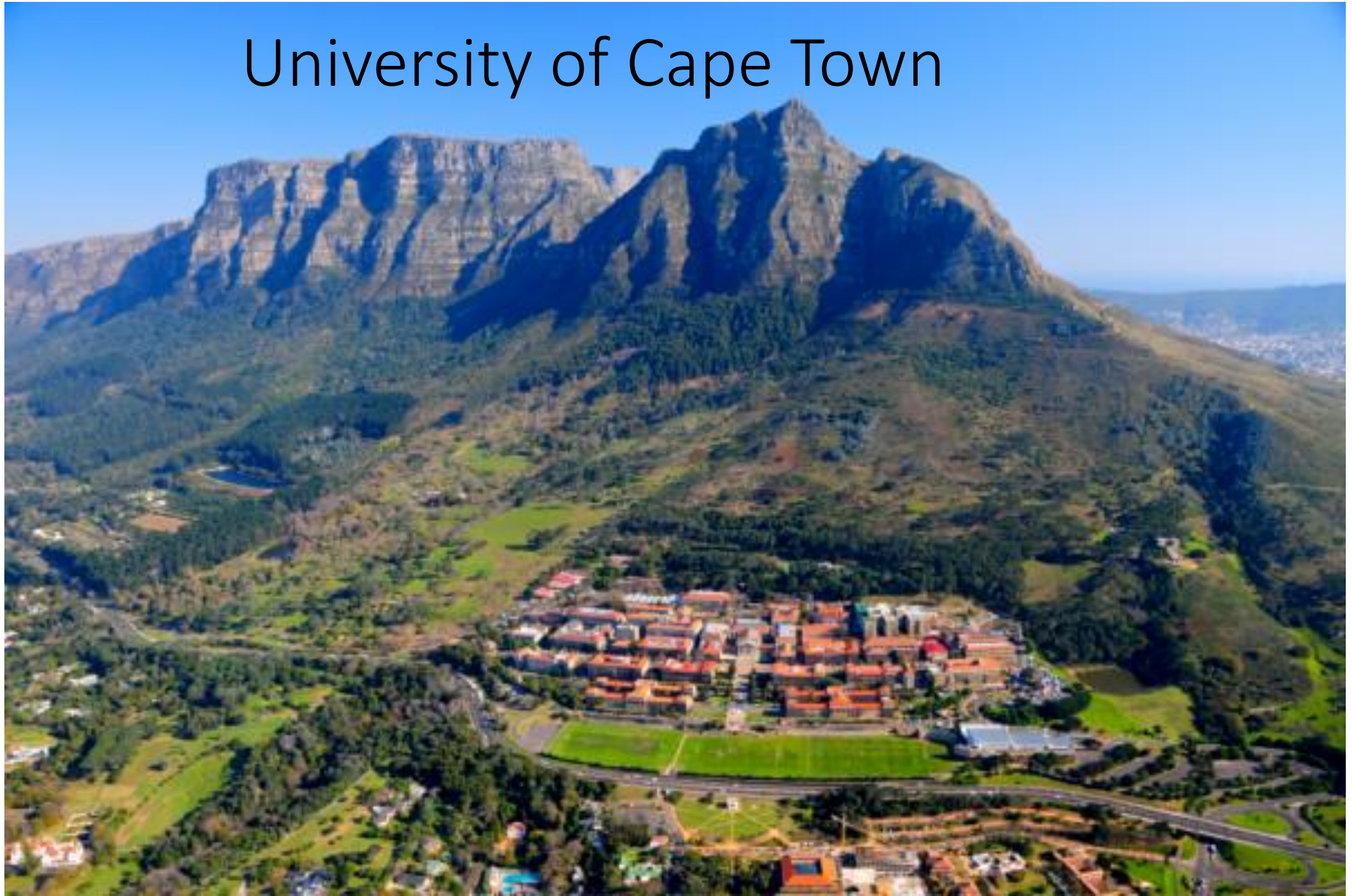
- Grandfathers arrived in South Africa ~1918
- Parents decided to have children educated :
Marist Brothers
- Medicine at UCT
- After 2 years RMO, returned to University to complete MSc Sport Science
- Decision to leave SA and explore PhD (Exercise Physiology)
- Travelled to UK, work as Paeds. SHO
- Met Helena and decided to move to NZ, secured Paeds terms at Waikato Hospital
- (After 3y Paeds), AMC exam
- Moved to Central Coast, NSW
- GDH
- RACGP, including country GP
- Sports Physician training: ACSEP



How was I/my family affected by Apartheid?

- 
- Designated “non-white”
 - Limitations of residency (group areas act), education, travel, socialising, employment opportunities, sporting, leisure, entertainment, dining, etc.
 - Anti-apartheid sentiment was monitored.
 - Family not forcibly removed!
 - Not eligible for military service!
 - Could move between “white” and “non-white” circles/ domains depending on location.
 - Relatively privileged.

University of Cape Town



Khayelitsha and Crossroads

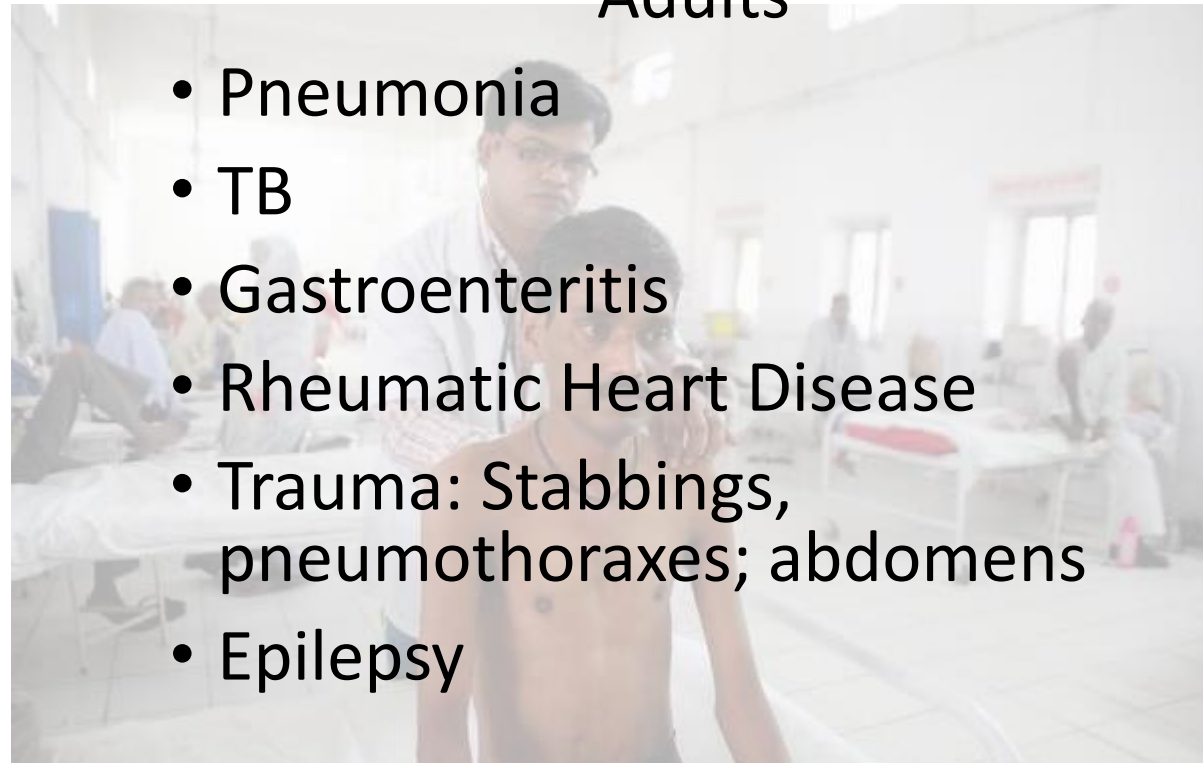


Livingstone and Groote Schuur Hospitals

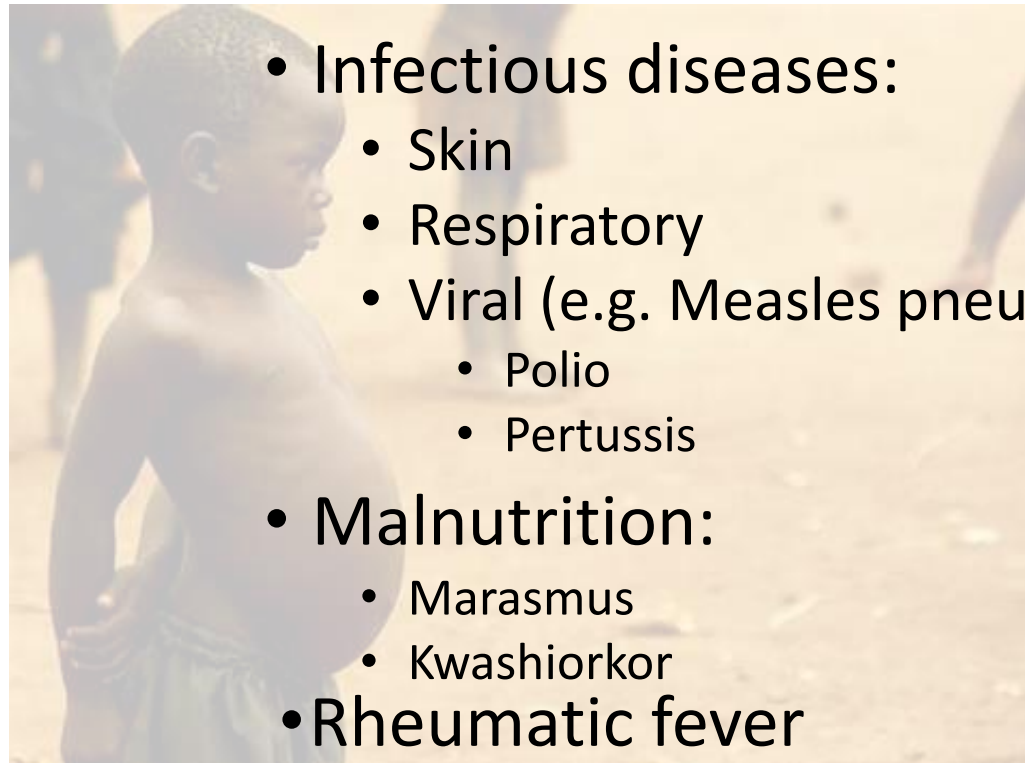


COMMON HOSPITAL PRESENTATIONS

Adults

- 
- A photograph of a doctor in a white coat and glasses examining a patient in a hospital ward. The ward has several beds and other patients in the background.
- Pneumonia
 - TB
 - Gastroenteritis
 - Rheumatic Heart Disease
 - Trauma: Stabbings, pneumothoraxes; abdomens
 - Epilepsy

CHILDREN

- 
- A photograph of a young child standing in a hospital ward. The child is shirtless and looking to the side. The ward has beds and other patients in the background.
- Infectious diseases:
 - Skin
 - Respiratory
 - Viral (e.g. Measles pneumonia)
 - Polio
 - Pertussis
 - Malnutrition:
 - Marasmus
 - Kwashiorkor
 - Rheumatic fever



Two Oceans Marathon: 56km



Comrades marathon 2019

Comrades Participation Trends

Year	Route	Entries	Starters	Starter %	Finishers	Finisher %	Male	Female	Male	Female
							Finishers	Finishers	finisher %	Finisher %
2000	Up	24552	23961	97.6%	20016	83.5%	16716	3300	83.5%	16.5%
2001	Down	15361	14125	92.0%	11076	78.4%	9416	1660	85.0%	15.0%
2002	Up	12167	11395	93.7%	9029	79.2%	7844	1185	86.9%	13.1%
2003	Down	13303	12526	94.2%	11416	91.1%	9546	1870	83.6%	16.4%
2004	Up	12059	11364	94.2%	10126	89.1%	8562	1564	84.6%	15.4%
2005	Down	13899	13043	93.8%	11728	89.9%	9726	2002	82.9%	17.1%
2006	Up	12066	10857	90.0%	9848	90.7%	8239	1609	83.7%	16.3%
2007	Down	12006	11147	92.8%	10051	90.2%	8288	1763	82.5%	17.5%
2008	Up	11189	10330	92.3%	8626	83.5%	7214	1412	83.6%	16.4%
2009	Down	12952	11345	87.6%	10005	88.2%	8256	1749	82.5%	17.5%
2010	Down	23567	16482	69.9%	14338	87.0%	11210	3128	78.2%	21.8%
2011	Up	19591	12648	64.6%	11054	87.4%	8870	2184	80.2%	19.8%
2012	Down	19545	16613	85.0%	11887	71.6%	9553	2334	80.4%	19.6%
2013	Up	19907	18578	93.3%	10232	55.1%	8271	1961	80.8%	19.2%
2014	Down	20104	14693	73.1%	12037	81.9%	9597	2440	79.7%	20.3%
2015	Up	22402	16517	73.7%	12799	77.5%	10295	2504	80.4%	19.6%
2016	Down	21569	16807	77.9%	14433	85.9%	11474	2959	79.5%	20.5%
2017	Up	21494	17031	79.2%	13851	81.3%	11151	2700	80.5%	19.5%
2018	Down	21272	19047	89.5%	16482	86.5%	13110	3372	79.5%	20.5%
2019	Up	24594	19078	77.6%	16439	86.2%	13384	3055	81.4%	18.6%

TOPICS

- SHOULDER
- Lower back/ SIJ/ hip
- Foot/ Ankle



SHOULDER COMPLEX

- Glenohumeral joint
- Acromioclavicular joint
- Sternoclavicular joint
- Scapulothoracic articulation



The shoulder



Anterior sternoclavicular ligament

Interclavicular ligament

Clavicle

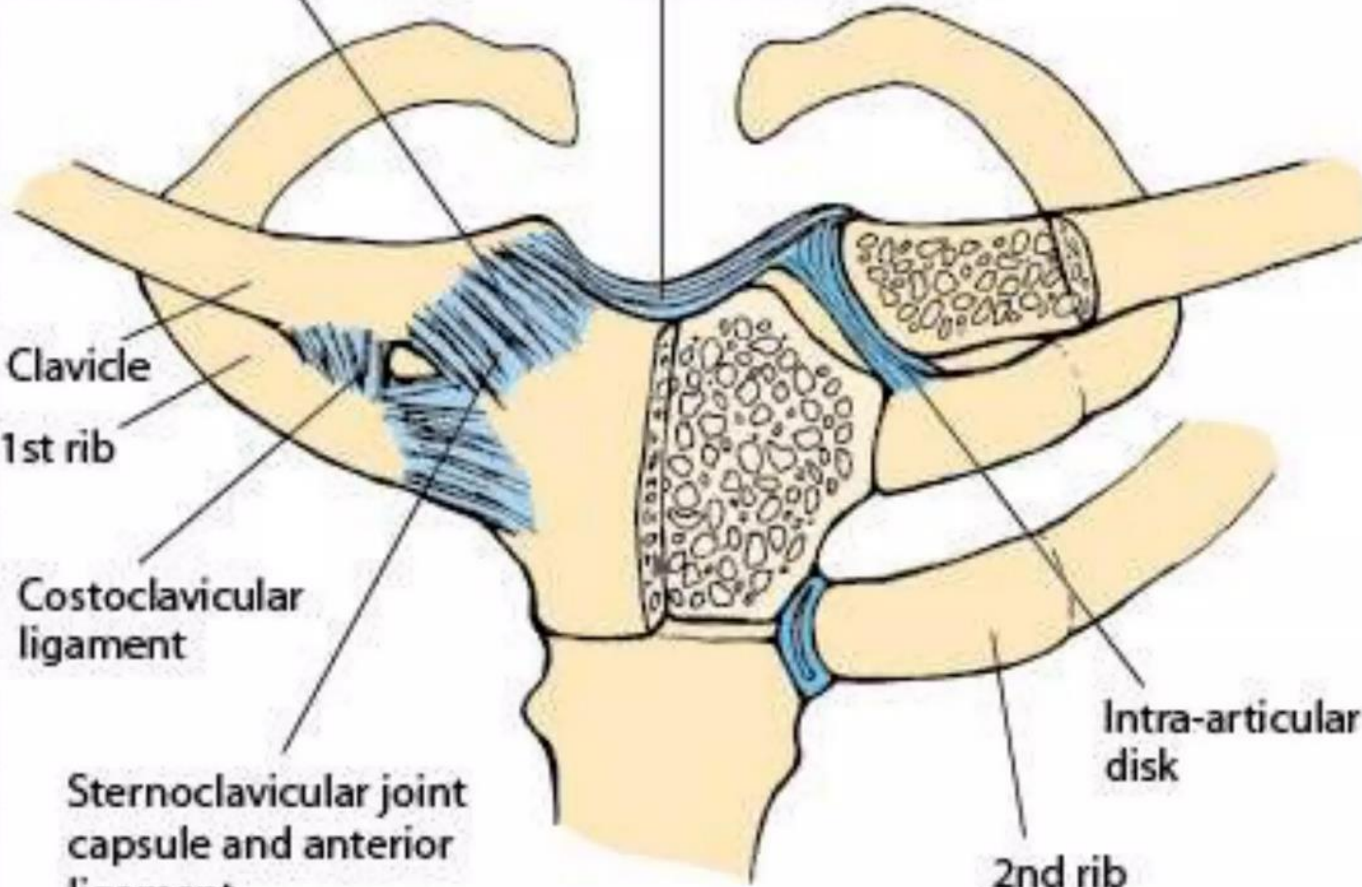
1st rib

Costoclavicular ligament

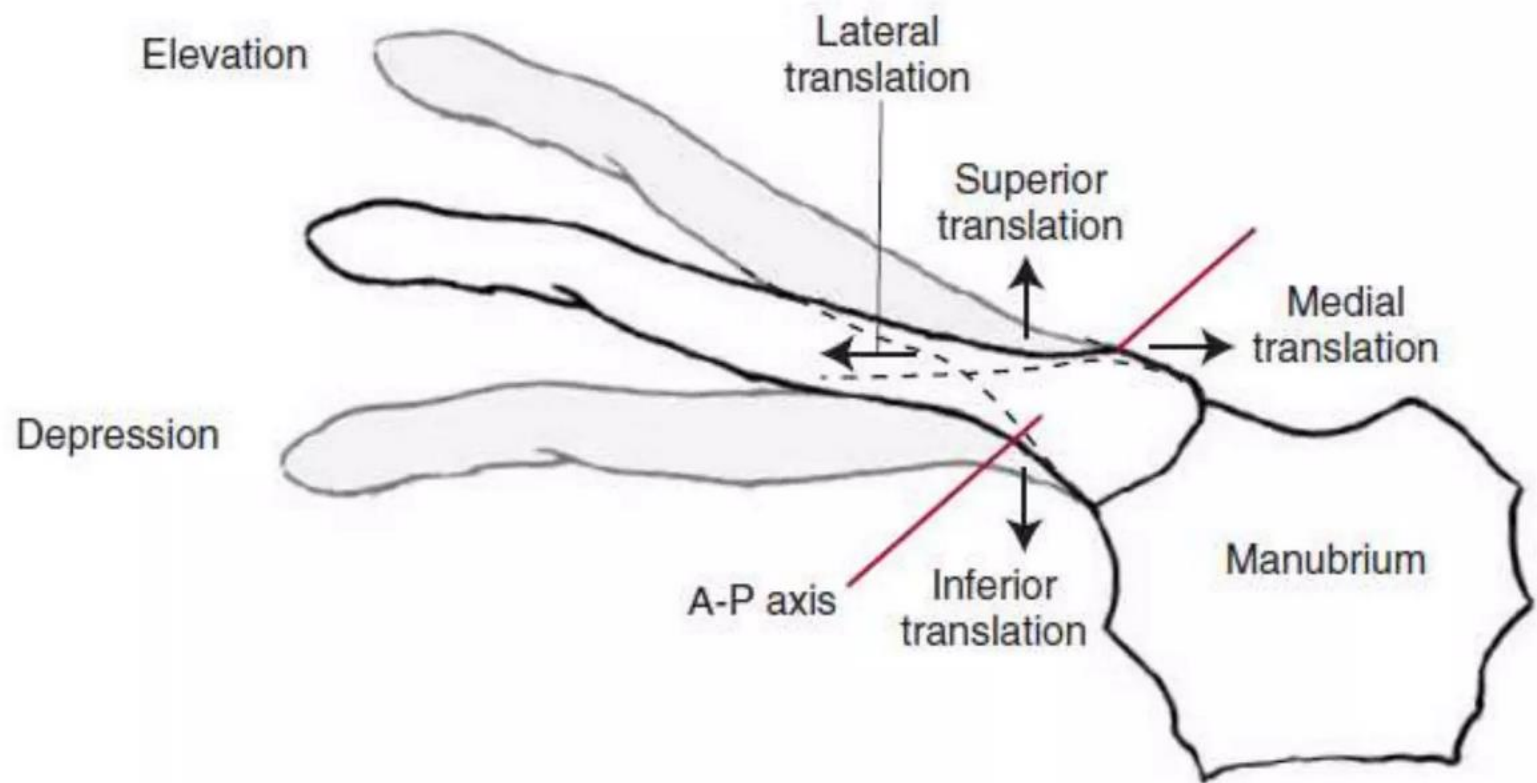
Sternoclavicular joint capsule and anterior ligament

Intra-articular disk

2nd rib



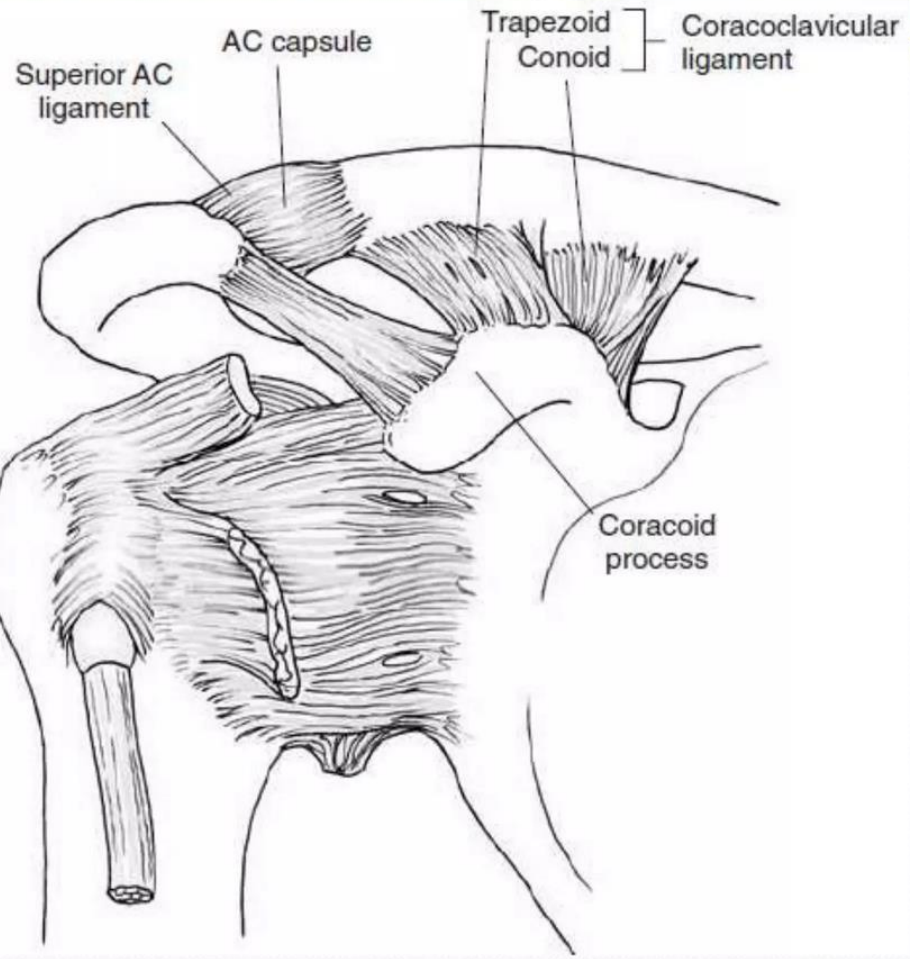
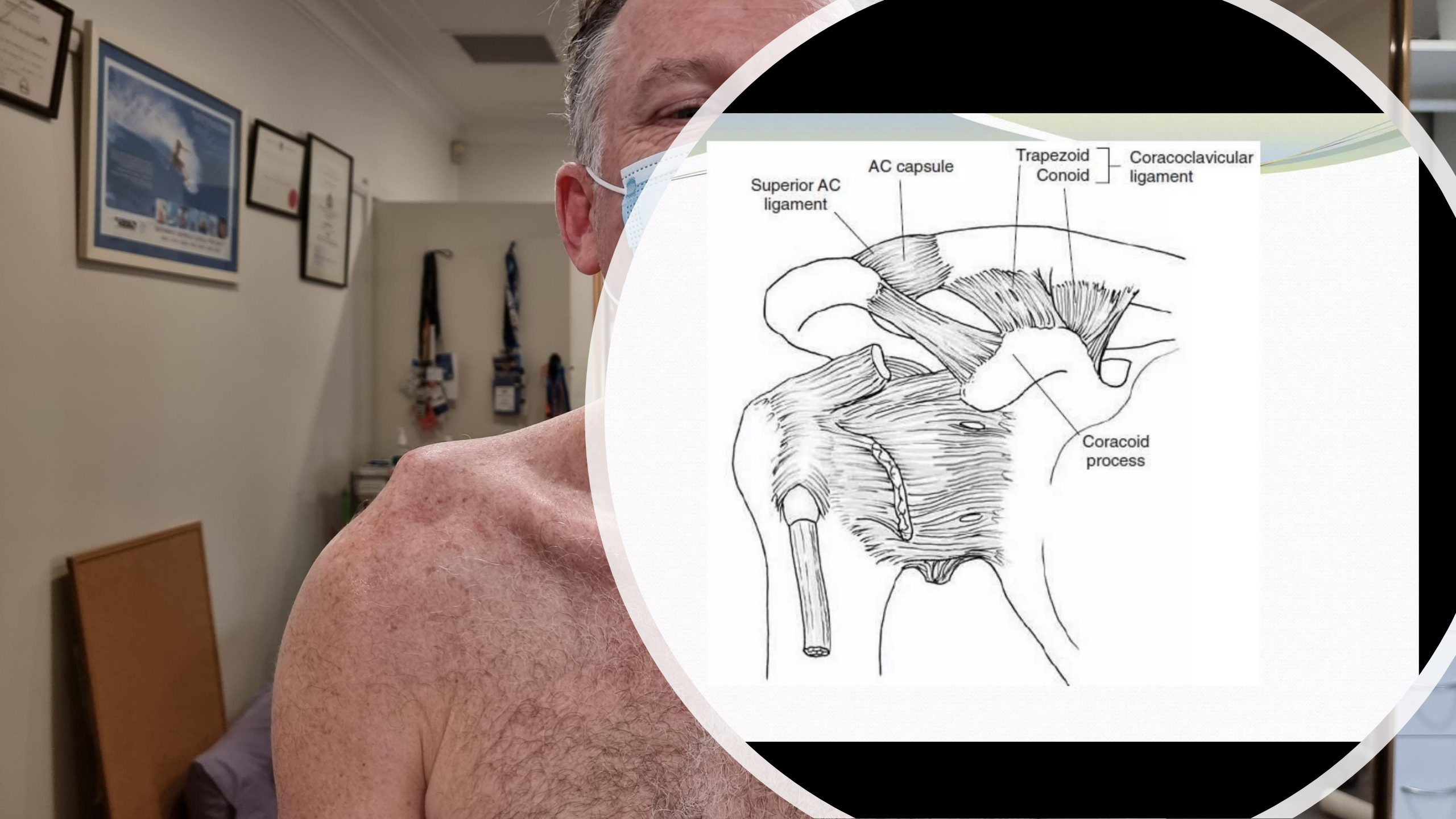
Elevation/depression of clavicle



A photograph of a swimmer in a pool. The swimmer is wearing a dark blue cap and is in the water. A hand is pointing towards the swimmer's shoulder area. The background is a blurred pool setting with other swimmers.

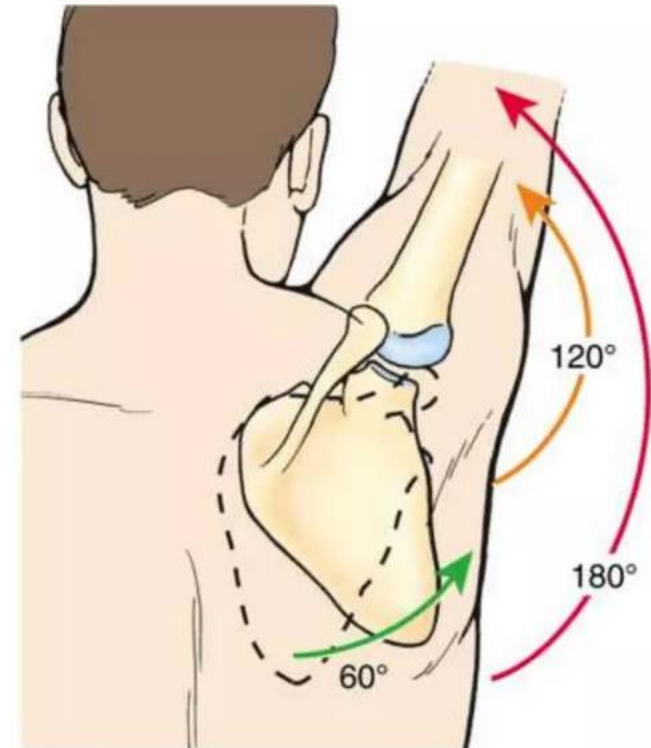
Subacromial impingement

- Secondary problem:
 - Biomechanics
 - Rotator cuff pathology:
 - Tendinopathy
 - Partial/ full thickness tears



Scapulothoracic Articulation

- Elevation of the arm involves motion at both the glenohumeral and scapulothoracic articulations.
- The average ratio of glenohumeral to scapulothoracic motion is 2:1
- Elevation of the arm also induces complex rotatory motion of the scapula, with anterior rotation during the first 90° followed by posterior rotation with a total arc of approximately 15°





Musculoskeletal Shoulder problems

ATRAUMATIC

- **Age based:**

- **Young:** Laxity, secondary impingement

- **Middle** aged: Rotator cuff tendinopathy, partial tears, subacromial impingement

- **Older:** Cuff tendinopathy, cuff tears, OA

TRAUMATIC

MECHANISM OF INJURY

- **Fall:**

- AC joint, SC joint
- Fracture : clavicle, humerus
- Rotator cuff tear
- Biceps rupture
- Dislocation GHJ, ACJ, SCJ

- **Outstretched arm**

- Dislocation GHJ
- Brachial plexus injury
- Pectoralis rupture

- Labral tear

Common shoulder presentations

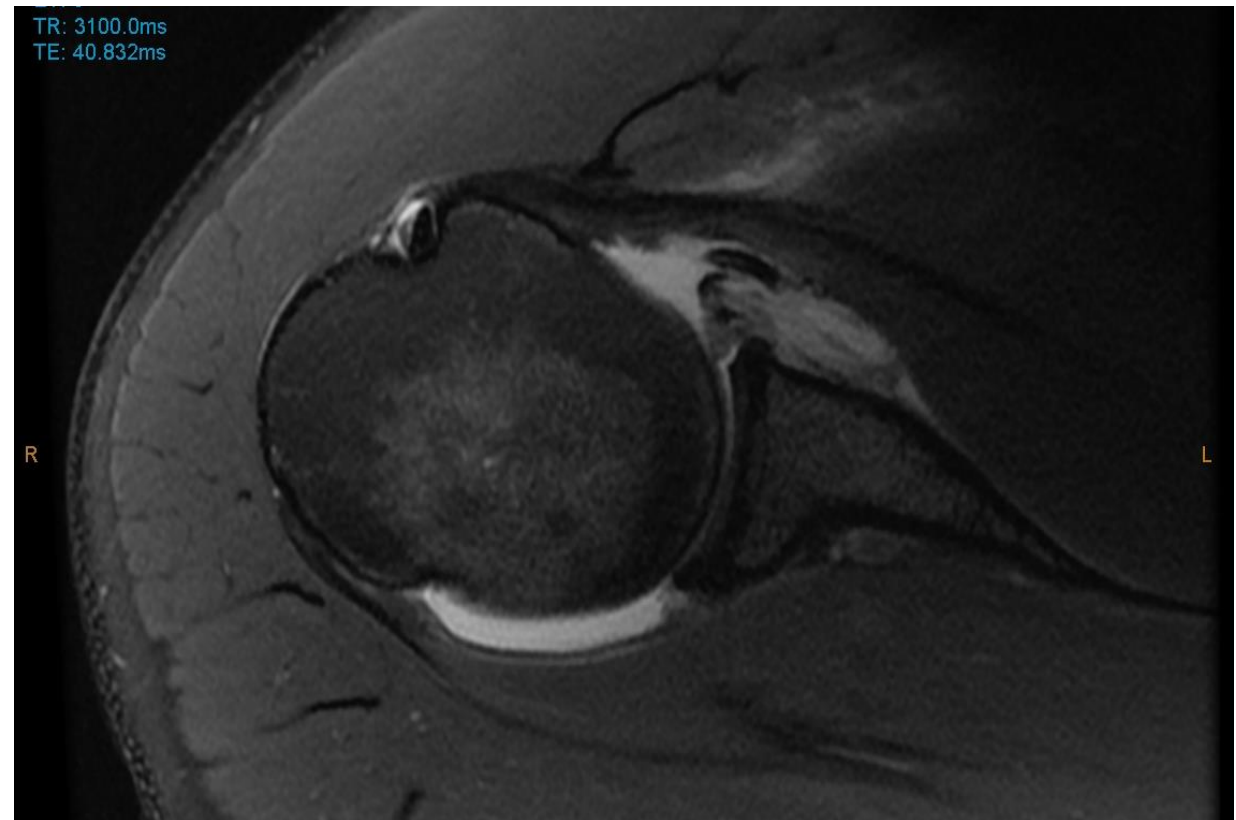
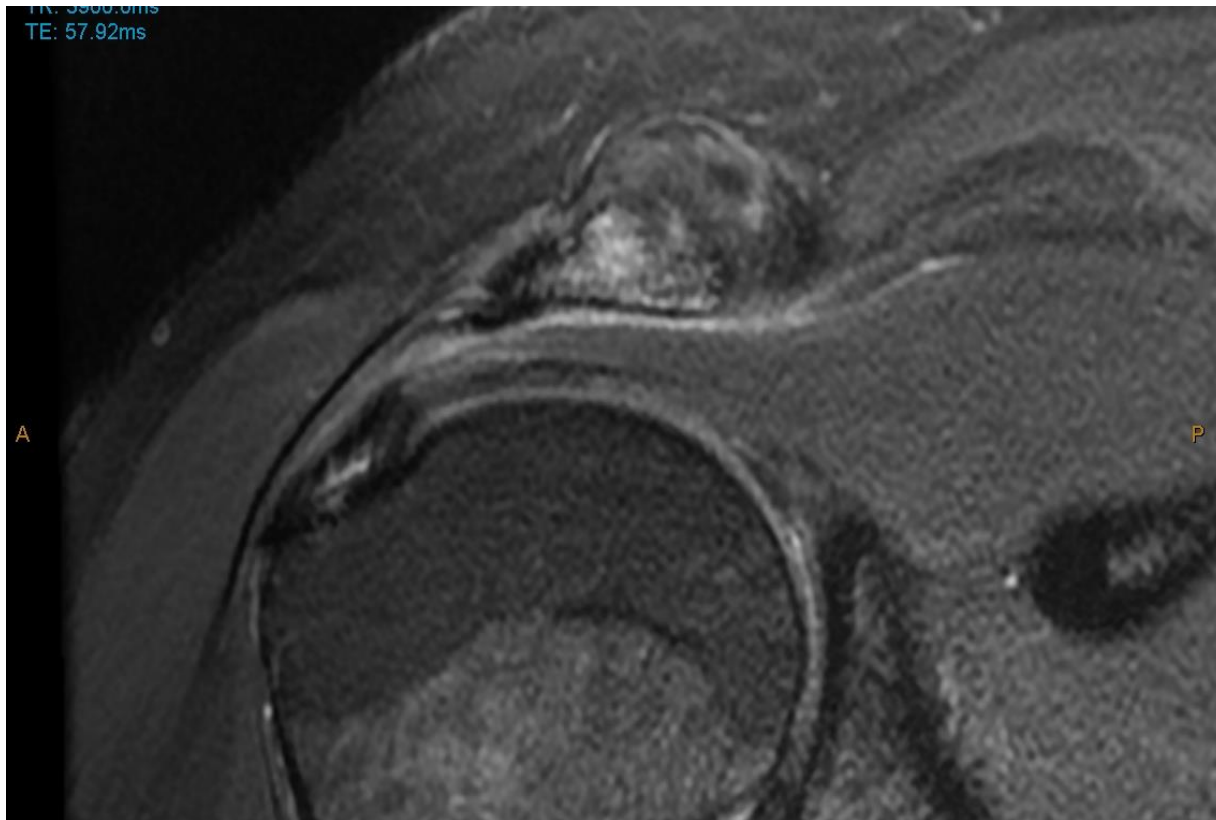
Overuse

- Instability
- Impingement
- Cuff tendinopathy
- Labral tear/ SLAP

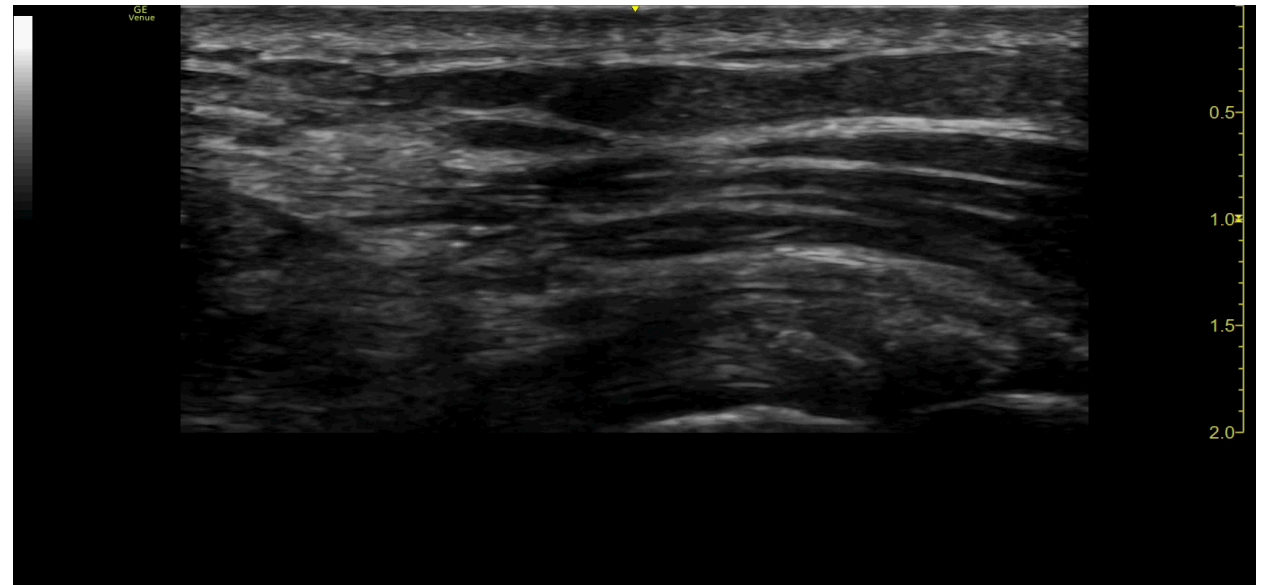
Chronic

- Osteolysis distal clavicle
- GHJ osteoarthritis
- ACJ osteoarthritis

Cuff tear/ Anterior dislocation



Calcific tendinopathy Supraspinatus



(Common) hip presentations

- Dysplasia

- Labral tear

- FAI

- Gluteal tendinopathy

- (Trochanteric bursitis)

- Osteoarthritis

Not to miss

- Stress/ pathological fracture

- Infection

- Neoplasm

Groin/hip 12%

Back 5%

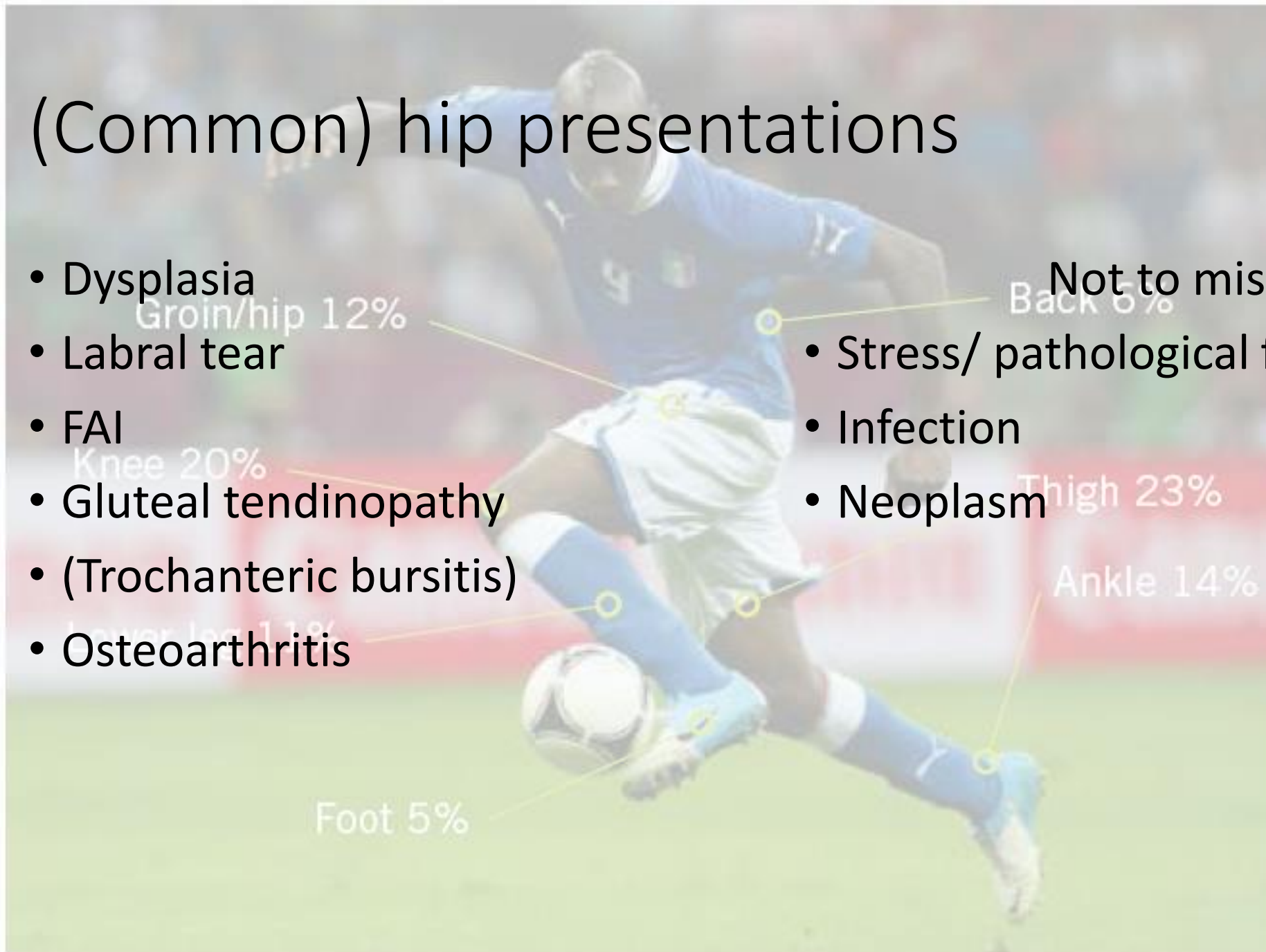
Knee 20%

Thigh 23%

Ankle 14%

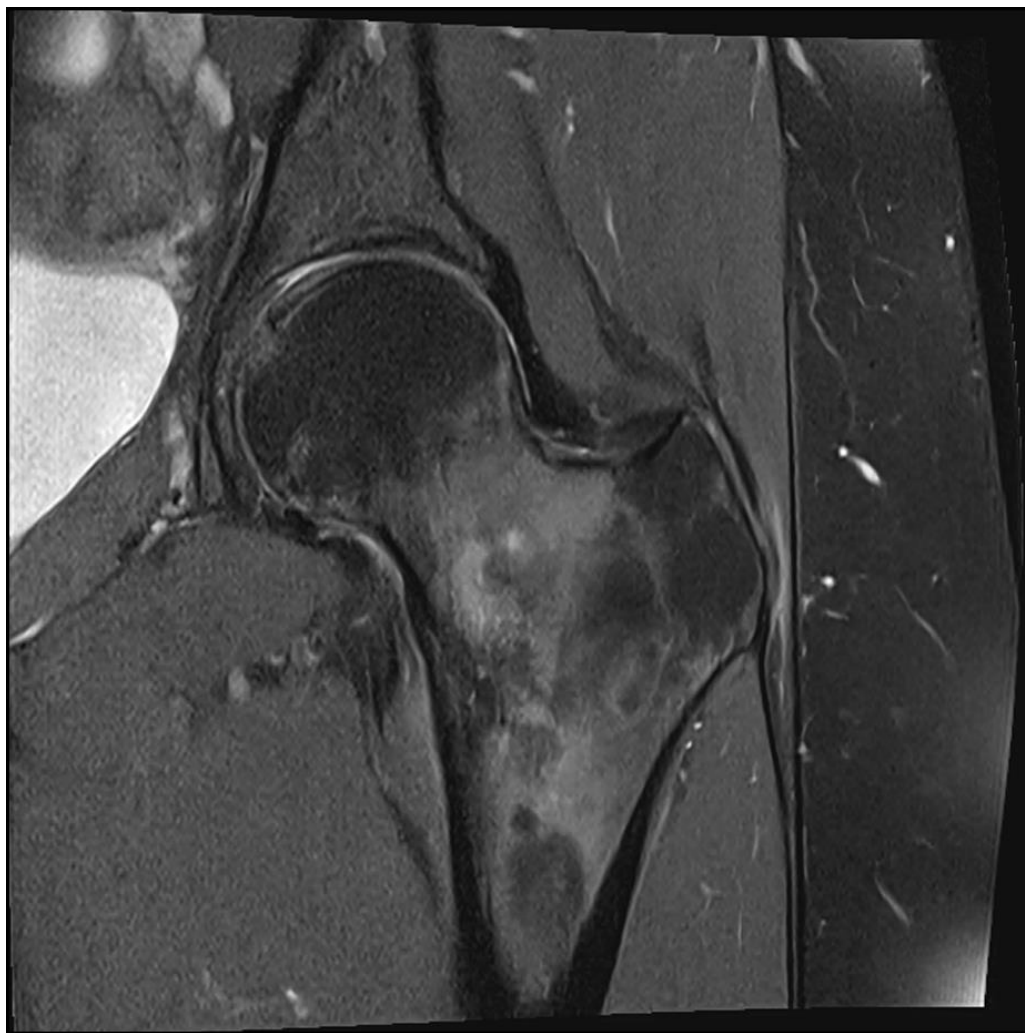
Lower leg 11%

Foot 5%

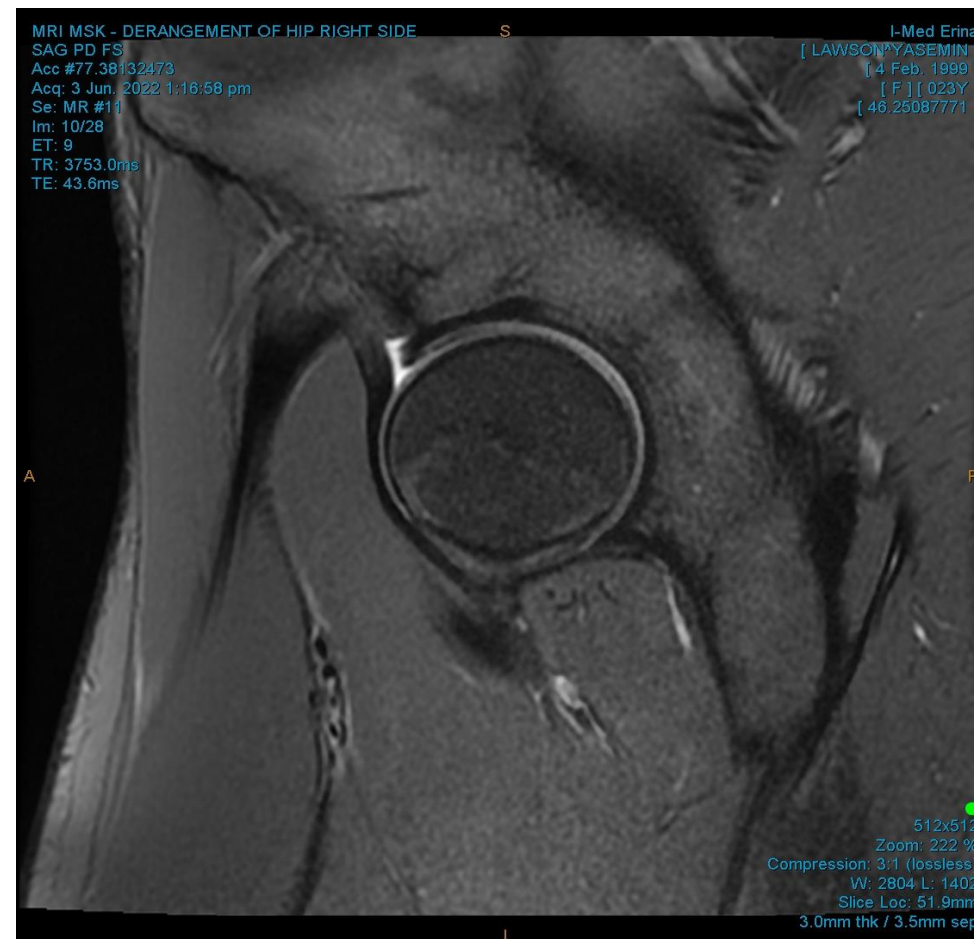
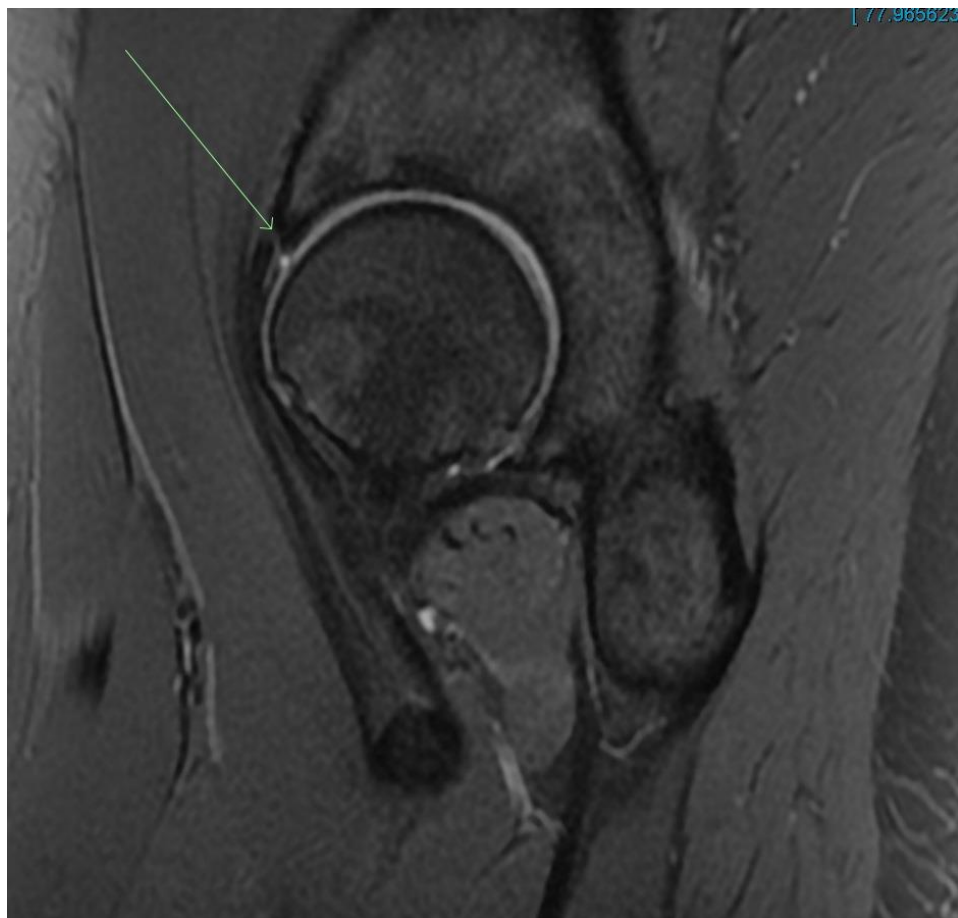


40y runner,
6 months L hip
pain, training for
Kilimanjaro.

Thyroid Ca,
Seronegative
arthritis,
osteopaenia

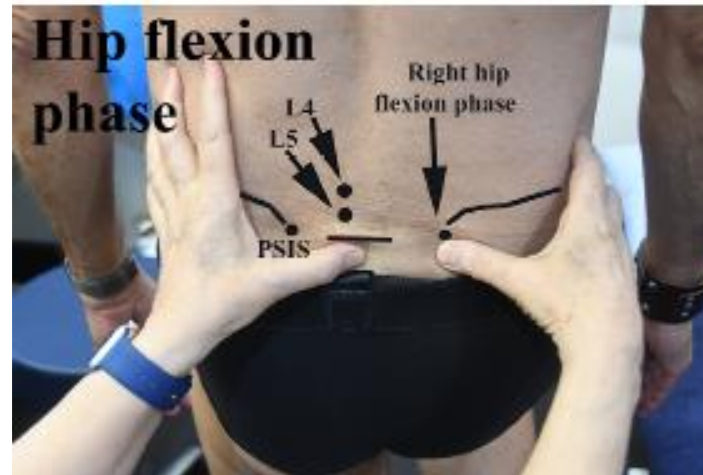
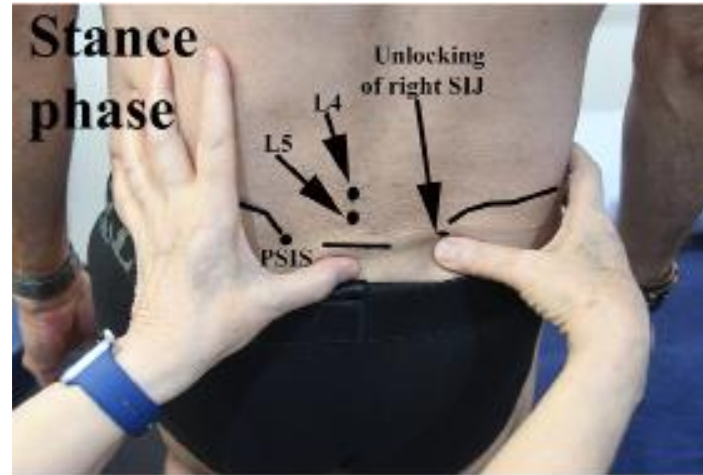


Labral tear



SIJ INSTABILITY, Laslett (2005), Hungerford, Saunders

- SIJ distraction*
- Thigh thrust*
- SIJ compression
- Gaenslen's
- Sacral thrust
- Active SLR
- Stork test



Diagnoses to exclude/ to not miss in Ankle and Foot.

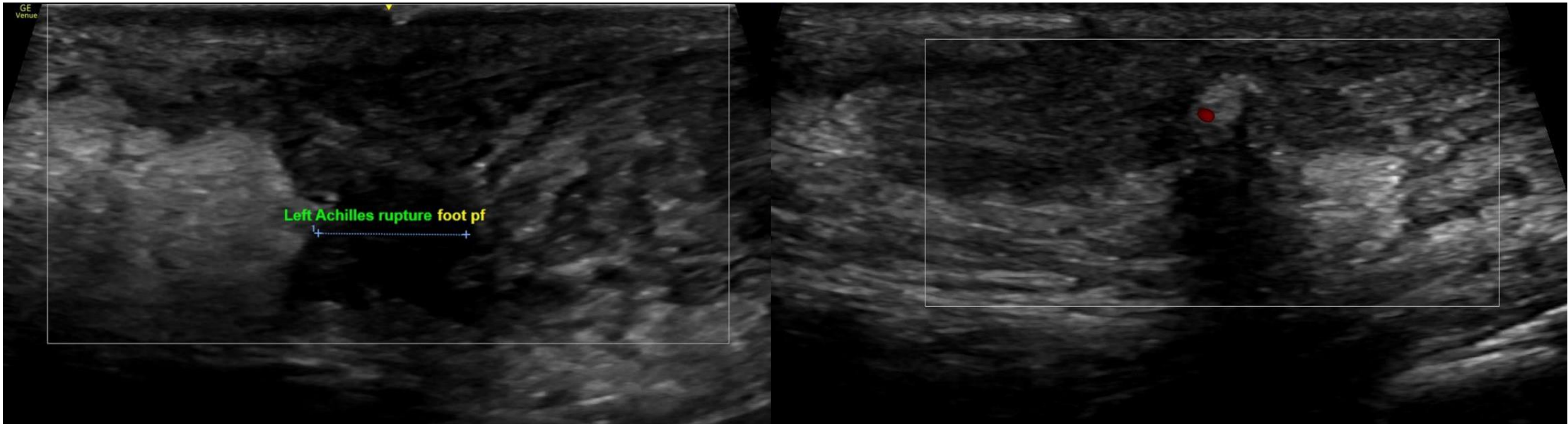
Rearfoot

- Achilles tendon rupture: Clinical diagnosis
- Retrocalcaneal bursitis
- Posterior impingement
- Proximal vs insertional Achilles tendinopathy
- Plantar fasciitis vs heel fat pad insufficiency

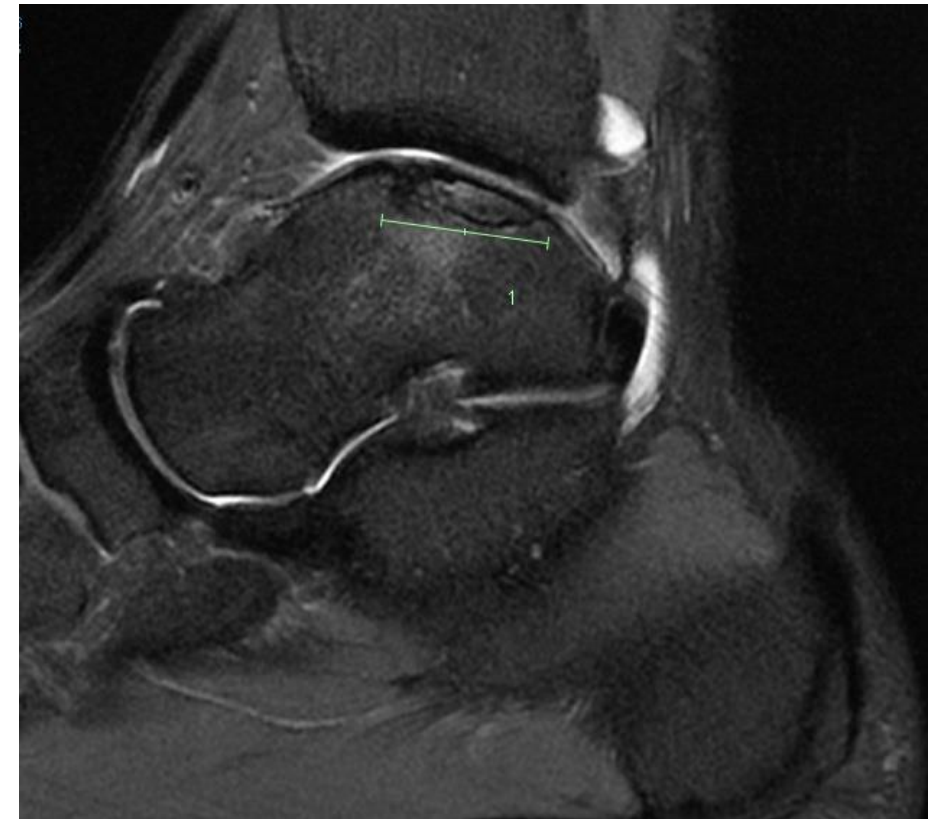
Midfoot

- Tibialis posterior tendinopathy/dysfunction
- Peroneal tendinopathy
- Base 5th MT fracture
- Navicular stress fracture

Achilles tendon rupture is a clinical diagnosis:
Simmonds/Thompson test; palpation.



Osteochondral defect: talus



Tibialis posterior tendon dysfunction

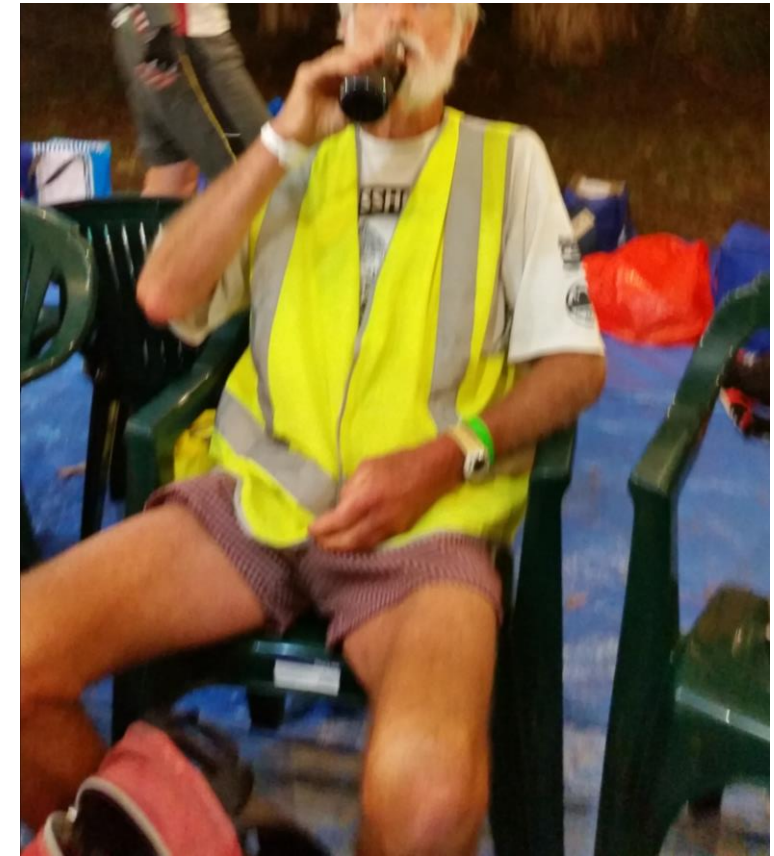
- Progressive flat foot in middle aged.
- Medial midfoot pain
- Difficulty single leg heel raise
- “Too many toes” sign
- Orthotics
- Tib post strengthening
- FDL tendon transfer/ calc osteotomy...



Ankle osteoarthritis



GNW 100 mile trail race





THANK YOU!

GP CLUB: MUSCULOSKELETAL 2 March 2023

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GP Club - Musculoskeletal

CENTRAL COAST: 2 MARCH 2023



THEPHN.COM.AU

Vertical Integration for Central Coast GPs,
Registrars, JMOs & Medical Students

LEARN & CONNECT

LUCKY DOOR PRIZE AT EVERY SESSION!

You are invited to join colleagues for online learning in a supportive environment facilitated by experienced GP educators. Designed to be informative and collaborative, there is an opportunity to learn, mentor and build new relationships. There is no cost to participate or obligation to attend every session. Please put the dates in your calendar now.

Vertical Integration Online Teaching & Learning Sessions are held from 7.30 am – 8.30 am via MS Teams.

DATE **SPEAKER / SESSION**

15th March 2023 Dr Gordon Lau: Mental Health eResources Update

29th March 2023 Dr Dimity Pond: "How to Approach the Patient with Memory Impairment"

26th April 2023 Dr Michelle Reiss: Diabetes Reversal

Vertical Integration will also be held on the following dates, topics are to be confirmed:

10th May, 24th May, 7th June, 21st June 2023

RSVP: Please [click here](#) to register

ENQUIRES: jpearson@thephn.com.au or 0428 168 258

Our Vertical Integration Program includes a face to face **GP CLUB** which will be held

On 2nd March 2023. Please [click here](#) to register.

Dr Jonathan King will be covering Musculoskeletal Medicine.