



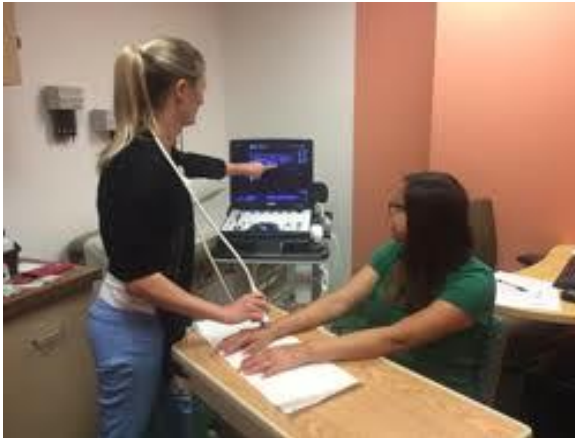
Sonography by **Nursing Advanced Practitioners** for assessing
Paediatric wrist fractures in the
Emergency Department

SNAPPED

#SNAPPED

- Study background
- Study design and Education undertaken by the ANPs
- Examples of the injuries as seen on ultrasound
- Outcomes to date
- Where to next

Background



Why Paediatric wrist fractures?



- High degree of diagnostic sensitivity
- It can easily be taught to practitioners with varying backgrounds
- It can be taught within a short time frame
- Well tolerated by this group of patients

Study Design

- To compare POCUS findings to plain film radiography reported by a radiologist
- Estimated numbers for statistical significance were calculated
- Inclusion/ exclusion criteria were set
- Consent was obtained from SUH research ethics committee

Study Aim

To ascertain the.....

- diagnostic accuracy
- sensitivity and
- specificity of.....

Point of care Ultrasound (POCUS)
for diagnosing paediatric
distal forearm fractures.



Potential Benefits

- To speed up the process of diagnosing these fractures and therefore time spent in ED
- To reduce the amount of radiographs that children need
- To further enhance the skill set of the ANPs within this ED

Inclusion Criteria

- Patients aged 5-15 years who present to the emergency department
- Closed injury to the wrist or distal ½ forearm
- Must be seen and examined by the ANP on duty



Exclusion Criteria

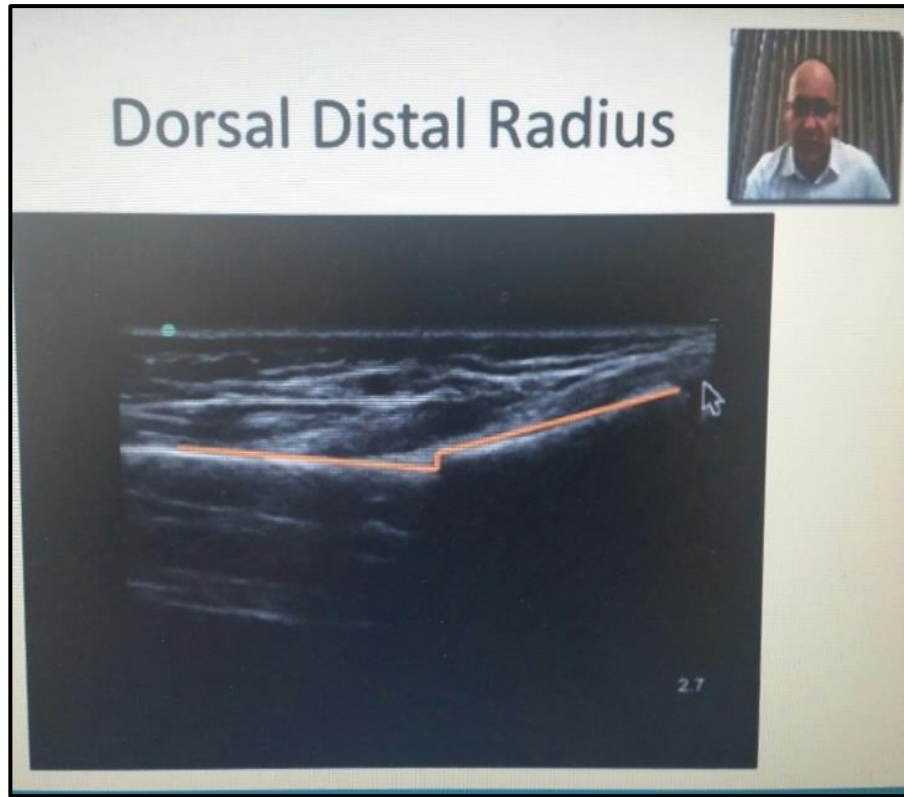
- Patients with multiple injuries
- Patient who have already had imaging, i.e. by GP/ another ED
- Patients with no hx of trauma
- Patients presenting for review
- Patients who decline consent/ whose parents decline consent

Tutorials/ Practical Sessions





Video Tutorials
www.ultrasoundvillage.com/educationalresources





Dorsoradial



Radial

Dorsoulnar



Ulnar






Followed by 8 weeks of supervised practice!!

Study Commencement

Analgesia given and splintage applied if necessary
Participants clinically assessed by ANP



Patient Information Leaflet

Emergency Department

SLIGO UNIVERSITY HOSPITAL

SNAPPED Research Subject Information Sheet January 2017. Ver1

#SNAPPED : Sonography by Nursing Advanced Practitioners for assessing Paediatric Wrist Fractures in the Emergency Department.

A Research Study to Assess if Specialist Emergency Department Nurses can Accurately Diagnose wrist and forearm Fractures in Children using Ultrasound

You and your child are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

What is the purpose of the study?

We want to see if ultrasound is as accurate as x-ray at picking up fractures in children with wrist injuries. Our Advanced Nurse Practitioners are highly trained in the assessment of all kinds of injuries. Ultrasound is a safe, inexpensive test which does not cause any pain. We want to test if the nurses are able to diagnose or rule out fractures in wrists in children, using ultrasound. We want to see if in the future we can reduce the number of x-rays we need. X-rays can take more time, and involve some radiation exposure (although it's very small). They also can be difficult to read sometimes.

Why has my child been chosen?

We are inviting all children who come to the ED with an injured wrist or forearm to participate.

Does my child have to take part?

No. It is completely up to you and your child to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. The standard of care you receive by your doctor or nurse will not change whether or not you decide to participate in this study.

What procedure will be done?

All children participating in the trial will undergo the same assessment and treatment as always. All children will have an x-ray done, and treatment decision will be based on the x-ray. The only difference is that there will be an additional step of the Advanced Nurse Practitioner doing an ultrasound of the injured area. The ultrasound machine is the same as that used to do scans on pregnant women, so it is very safe. It may be a little uncomfortable on the sore arm, but no more than a normal clinical examination of the arm. The Nurse will log the result of the scan on a sheet of paper. This will be kept for research only, and will not be used in deciding what the diagnosis is or what treatment might be needed. Later on we will compare the nurses scan result with the Radiology report of the x-ray. That way we can see if the nurses scan result is just as accurate.

Are there any risks to taking part?

No. Ultrasound is very safe and there are no side-effects. Your child will receive exactly the same treatment as they would have before this research study started.

What are the possible benefits of taking part?

There are no direct benefits to your child in taking part. Your child will receive exactly the same treatment as they would have before this research study started. We hope that the information we get from this study may help us to make diagnosis of wrist fractures easier for children who present in the future.

Will my taking part in this study be kept confidential?

Yes. All information which is collected about your child during the course of the research will be kept strictly confidential. No information about your child will leave the hospital.

What will happen to the results of the research study?

After we have collected all the results, we will analyse the data, and submit a report for publication to an Emergency Medicine journal. The report may also be presented at Medical or Nursing Conferences. That way other hospitals and emergency Departments can also learn from this research projects. The final report will not contain any information which would identify any of the children's details.

Who is organising and funding the research?

The research is being organised by the clinical staff of the Emergency Department at Sligo University Hospital. No member of the research team is receiving any funding for this.

Who has reviewed the study?

Sligo University Hospital -Research Ethics Committee(s), which reviewed the study. **Contact for Further Information**
Lead Investigator: Dr Michael Sweeney, Consultant in Emergency Medicine The Emergency Department, Sligo University Hospital, Sligo. Tel. 0719136800; Michael.sweeney1@hse.ie;
Co-Investigator: Ms Denise Guckian, Advanced Nurse Practitioner The Emergency Department, Sligo University Hospital, Sligo Tel. 0719136800; Denise.guckian@hse.ie

Thank you to you and your child for participating in our Study. It is very much appreciated. Please keep this Patient Information Sheet and your copy of the Signed Consent Form for your own records.



2

Consent Form

Informed consent was obtained from the parent or guardian

Verbal consent was obtained from the child

To date no parent or child has declined to participate

Emergency Department
 
SLIGO UNIVERSITY HOSPITAL
CONSENT FORM
Consent by subject for participation in Research Protocol

Protocol Number:
Patient Identification Number for this trial:
Title of Protocol: #SNAPPED : Sonography by Nursing Advanced Practitioners for assessing Paediatric Wrist Fractures in the Emergency Department

Doctor(s) Directing Research: Dr Michael Sweeney and Dr Karen Harris

1. I confirm that I have received a copy of the Information Sheet for the above study. I have read it and I understand it. I have received an explanation of the nature, purpose, duration and foreseeable effects and risks of the study and what my child's involvement will be.
2. I have had time to consider whether to allow my child to take part in this study and I have had the opportunity to ask questions. My child has also assented to taking part.
3. I understand that my child's participation is voluntary and that I or my child are free to withdraw at any time, without giving any reason, without my child's medical care or legal rights being affected.
4. I understand that sections of any of my child's medical notes may be looked at by responsible individuals from Sligo University Hospital. I give permission for these individuals to have access to my child's records for the purposes of this study.
5. I agree to allow my child take part in the above study.

Name of patient

_____ Name of Parent or Guardian	_____ Date	_____ Signature
_____ Name of person taking consent <i>(if different from investigator)</i>	_____ Date	_____ Signature
_____ Investigator	_____ Date	_____ Signature

1 copy for patient, 1 copy for investigator, 1 copy for medical records

Data Collection Sheet

- POCUS examination is carried out and findings recorded on the data collection sheet
- Patient was then sent to radiology
- Results of x-ray and further treatment recorded in patients notes.

SNAPPED: Sonography by Nursing Advanced Practitioners for assessing Paediatric Wrist Fractures in the Emergency Department.

Data Collection Sheet

Date	Patient ID Label

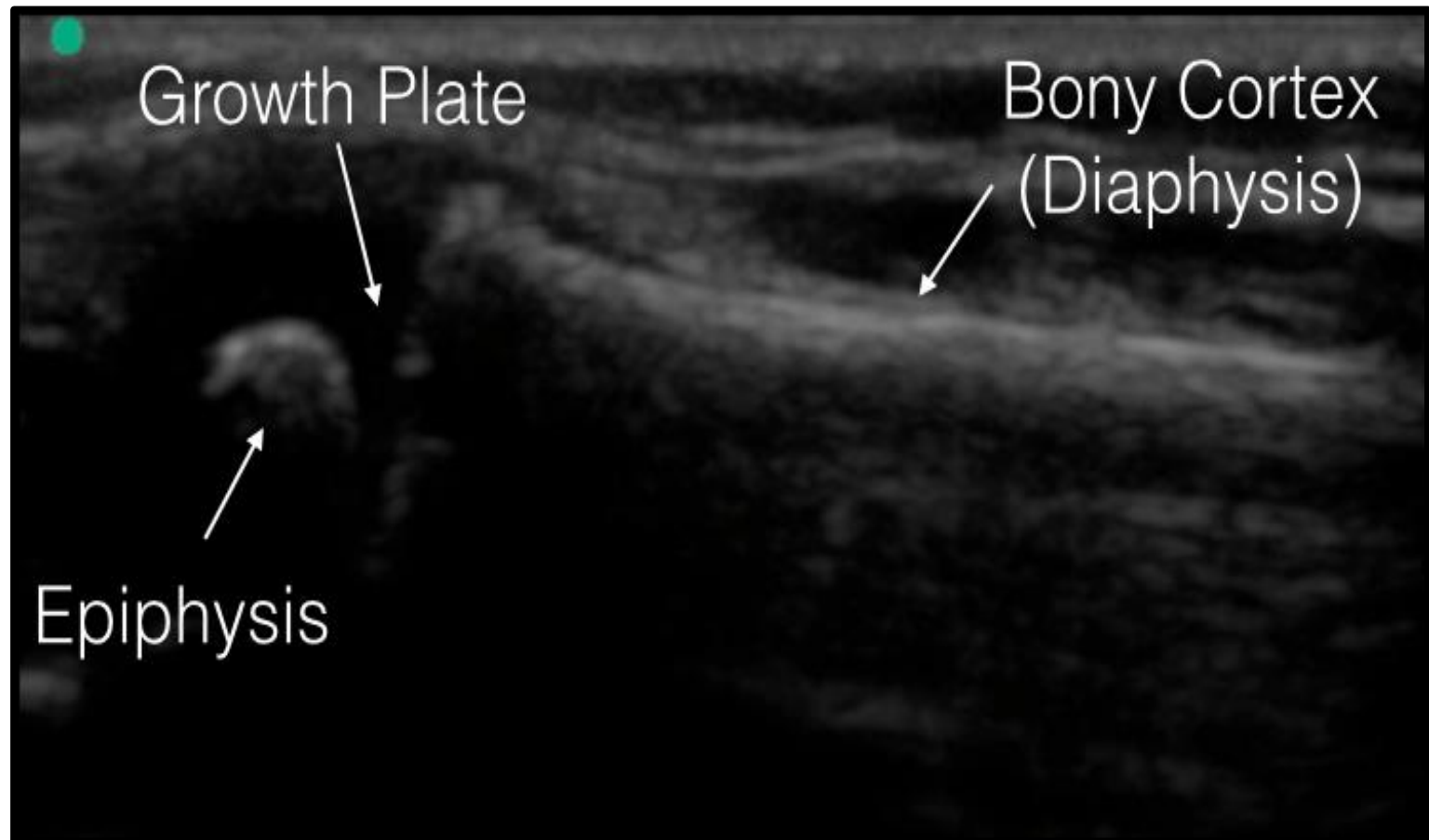
To be Completed by ANP:			To be Completed by Investigator:		
US findings: Tick ONE			Radiologists Report Best Fit		
No Fracture	Fracture	Inconclusive/ unsure	No Fracture	Fracture	Inconclusive/ unsure

Data Collection

- The completed data collection sheet is collected
- ED consultant or SPR will follow up the x-ray reports and attach these to the data collection sheets.
- Patients care is managed on the basis of the x-ray findings, as is current practice.



Paediatric Ultrasound Distal Radius



Case Study

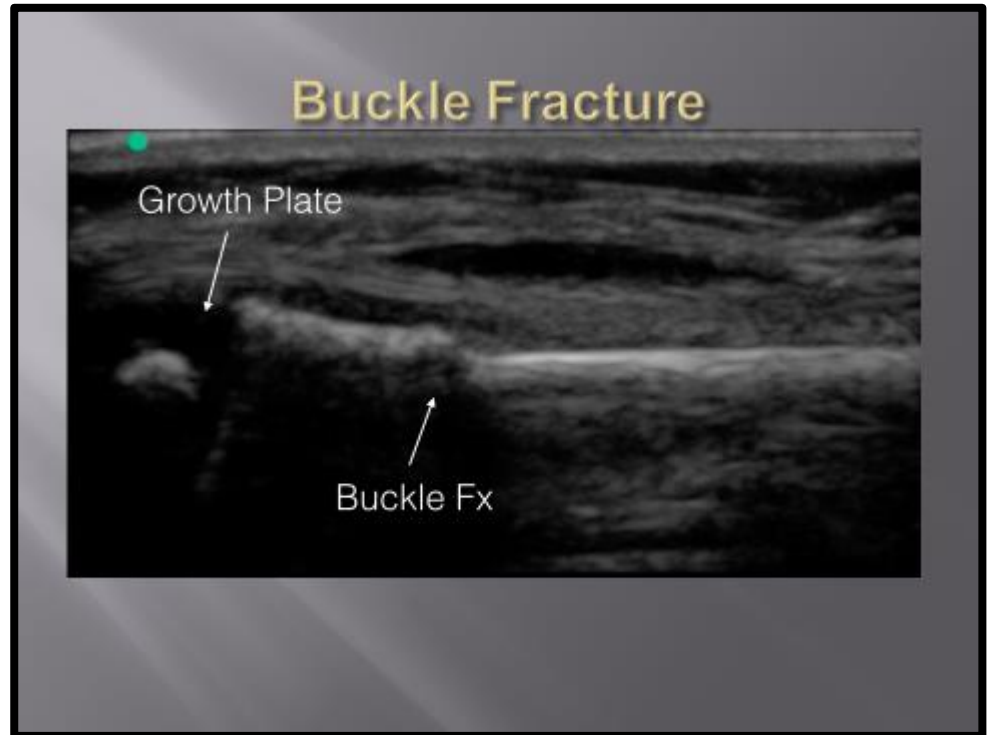
13 year old boy, presenting with an injury to his left wrist.

Playing football, ball hit patients hand, hyperextending his wrist.

On arrival given analgesia.

Musculoskeletal and neurovascular examination

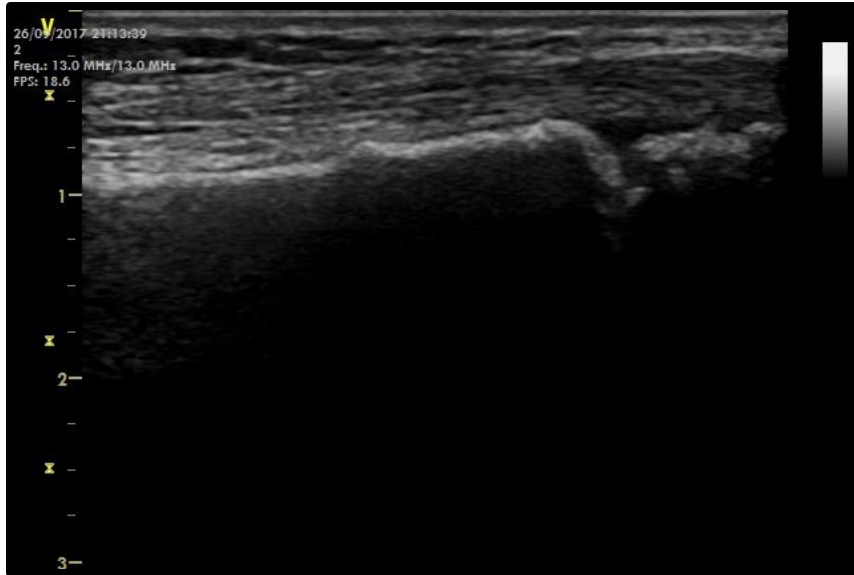
#SNAPPED study discussed with his mum, and consent obtained.



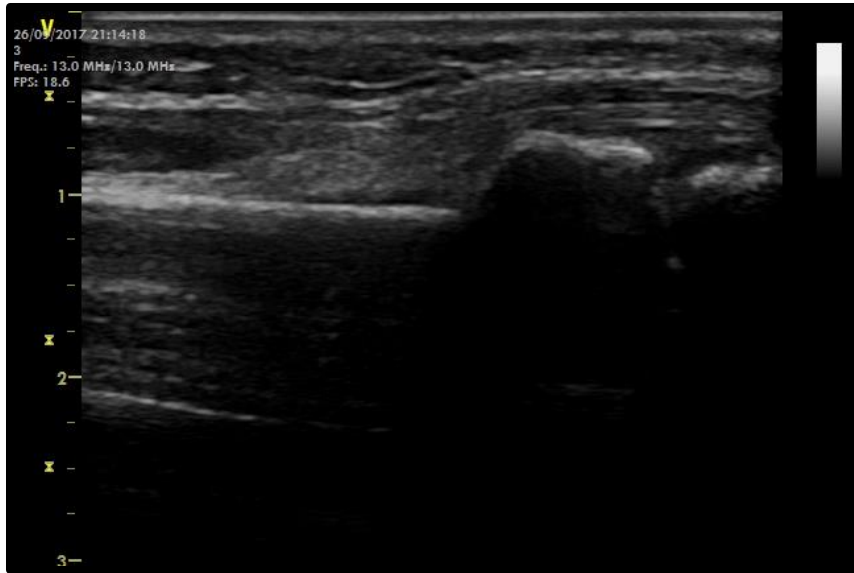


15 year old boy, fall while running, presents with an injury to his left wrist





Dorsoradial



Radial

#Snapped In Action



Outcomes

- 65 patients have been recruited thus far.
- Both children and parents have been happy to participate
- Children tolerated the POCUS examination well
- Some parents were positive towards the use of ultrasound v radiology

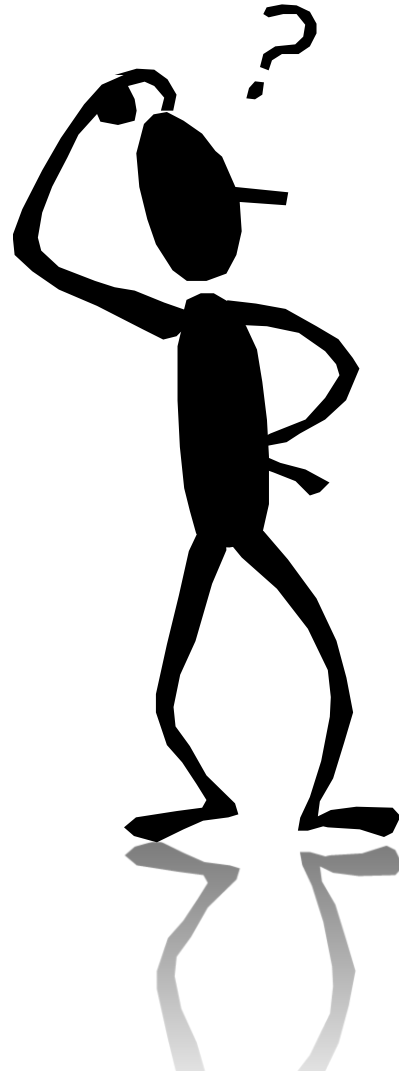
What Next

- Study completion and correlation of results in next 4-8 weeks
- Findings will be collated, analysed and published

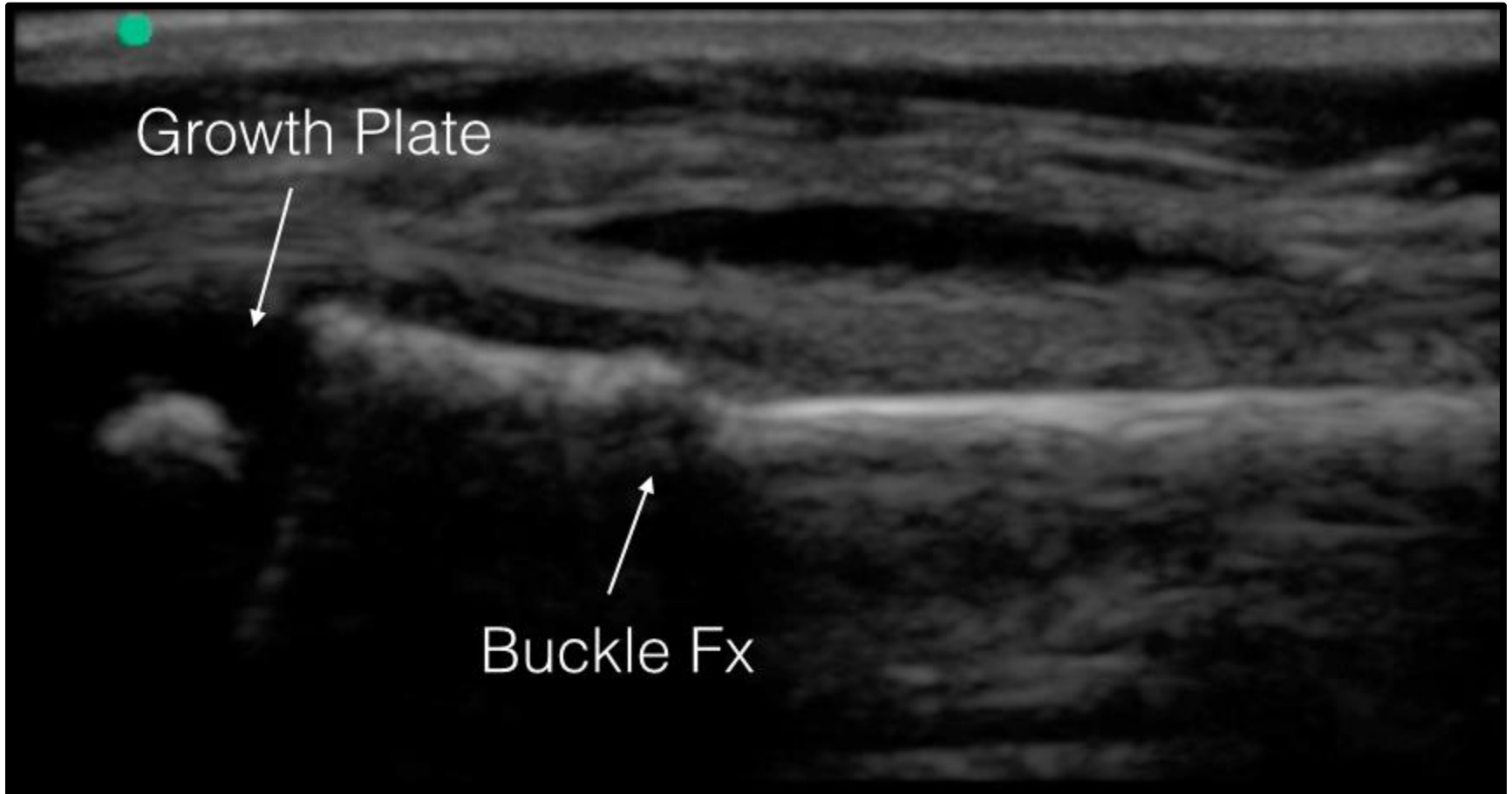
Conclusion

- The project has expanded the skill set of ANPs within the ED
- It has improved knowledge of research methodology.
- It continues to foster an environment of research and education within the ED in SUH.
- We hope that the final outcome will assist in the assessment and management of paediatric wrist injuries.

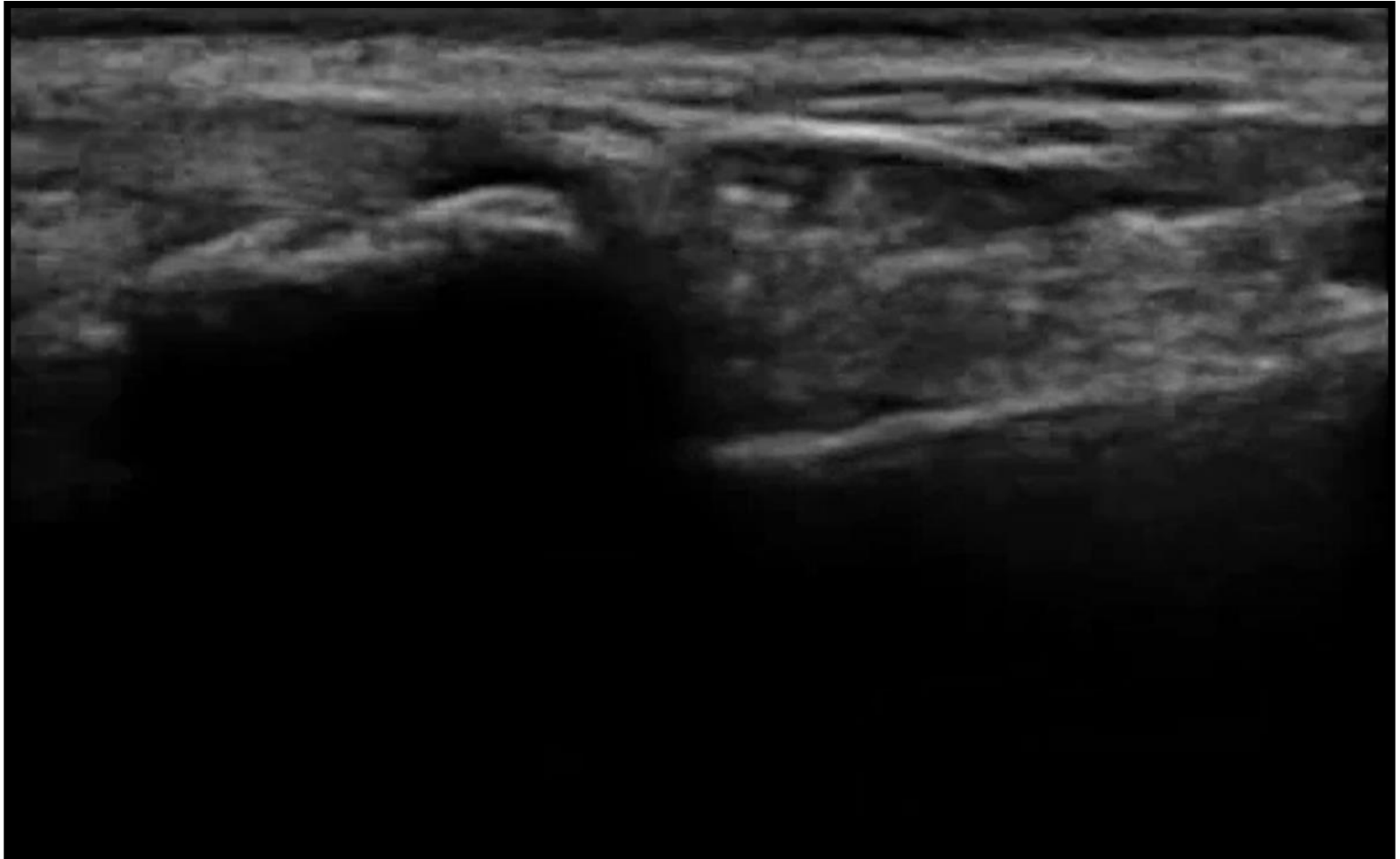
Questions

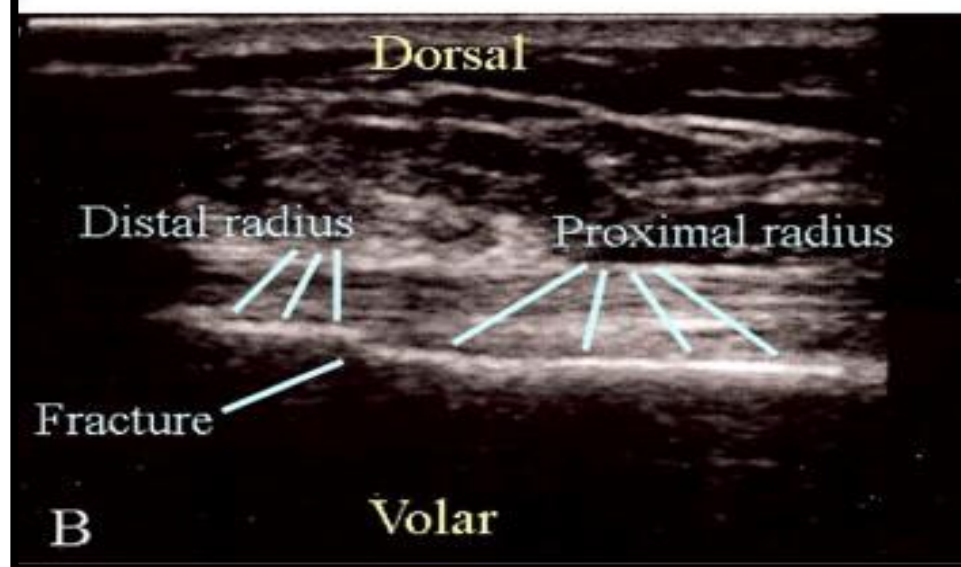
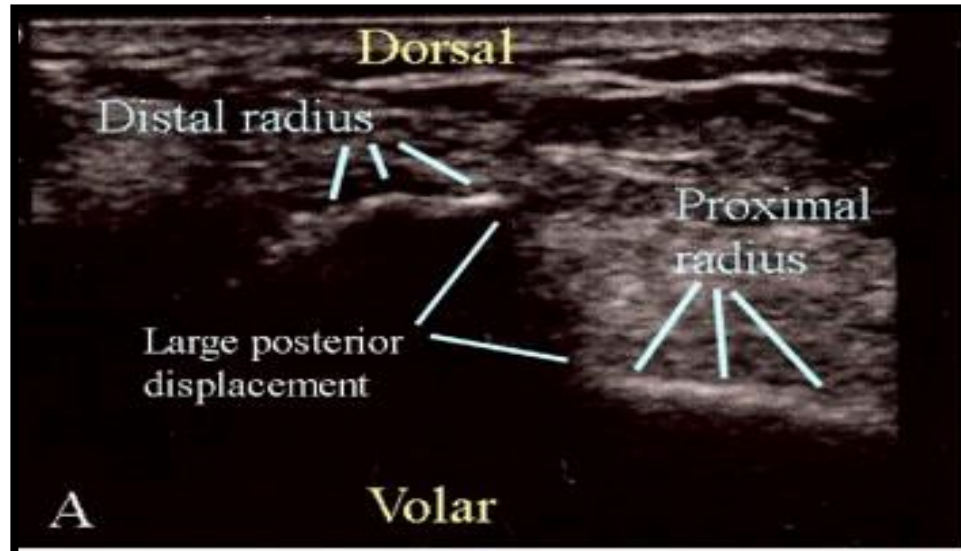


Buckle Fracture



Fracture Distal Radius

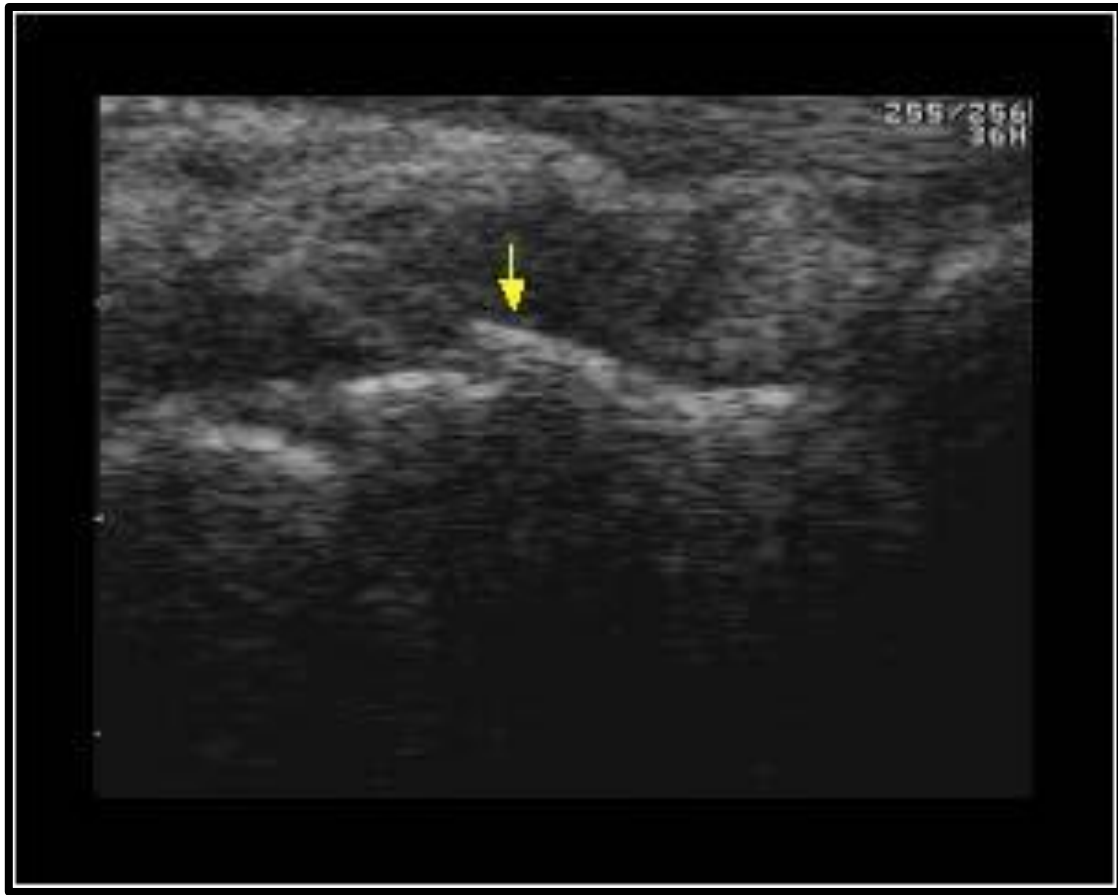


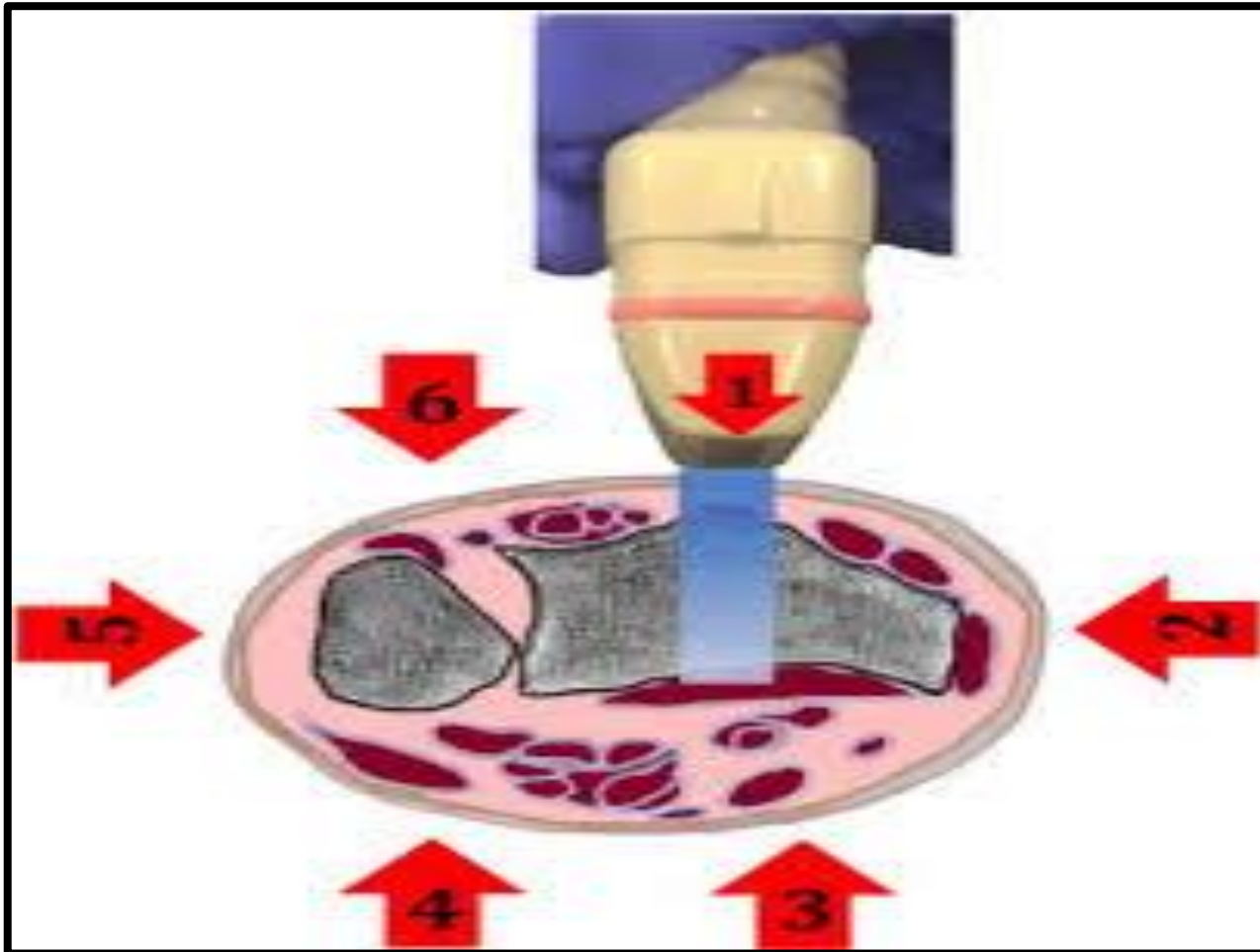


Ultrasound Scaphoid



Scaphoid Fracture





6 Point Ultrasound distal forearm