

# PEARLS

POCUS for Emergency and Acute Care  
in Resource-Limited Settings

## Welcome to our Monthly Newsletter

Editors and contents: Dr Jono Henry & Long Nguyen  
Design: Marcus Chan & Long Nguyen



First PEARLS-ED course in Vanuatu, 2022.

### REMINDERS

#### Upcoming:



**Monday 20th May  
+7AM GMT**

Image Review Session 02  
Dr Lewis McLean  
<https://unimelb.zoom.us/j/89171569520>  
PW: 584496



**Monday 3rd June  
+7AM GMT**

Monthly Lecture series  
Dr Jessica Schmidt  
Top tips for global POCUS  
<https://unimelb.zoom.us/j/1618424483>  
PW: 316519

02

PEARLS in  
numbers

05

Education  
corner

07

Communication  
Board

# PEARLS in numbers

64

Clinicians trained

31

QA image reviewers on cloud

18

Doctors and sonographers who've travelled to teach at least one course

33

Butterfly probes distributed, through generous funding support of partners

616

Studies uploaded to cloud

6

In-person workshops across 3 countries (4 PEARLS-ED, 2 PEARLS-CC): Vanuatu, Tonga, PNG

6

Learners began PEARLS training through remote coaching from PNG, Kiribati and Nauru

1

Learner graduated to faculty:  
Dr Lawrence Boe

## Top 5 learners

Ranked by the number of successfully QA-ed uploads in the previous month.

1 - Seluvaia Taunaholo - Tonga 🇹🇴

2 - Carolyn U Kema - PNG 🇵🇳

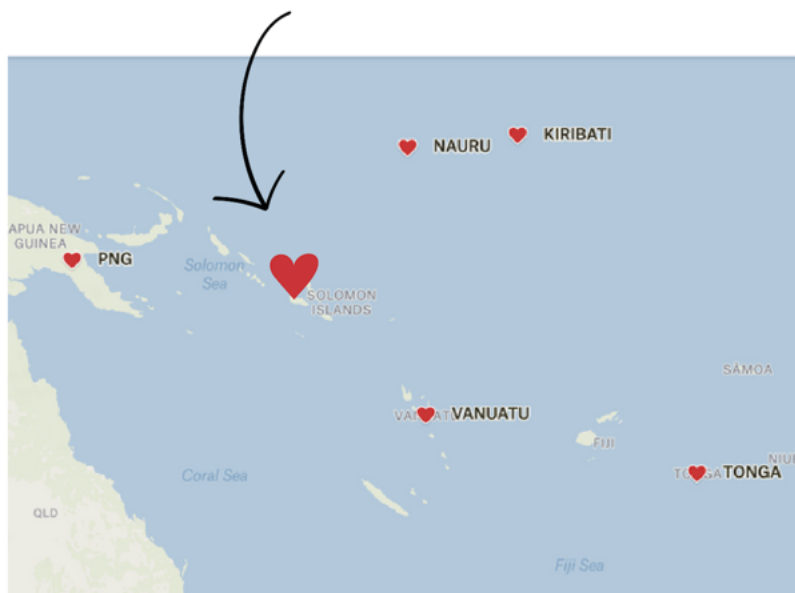
3 - Micah Misivet - PNG 🇵🇳

4 - Josefa Tama Tokon - Vanuatu 🇻🇺

5 - Robinson Toukoune - Vanuatu 🇻🇺

Super amazing everyone! Keep up the great work and we look forward to reviewing more scans this month! 🙌

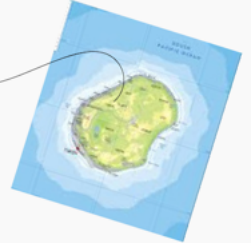
Coming soon 🇸🇲



# Project Nauru catch-up



*Dr Allan Whitehead and Dr Vincent Atua in Brisbane, Australia*



Vincent was put in contact with me via Jono who previously had met him when he was in Vanuatu.

We started communicating via WhatsApp from October last year.

I have been running real-time tele-ultrasound training sessions for 1 hour in the early afternoon on a weekday once per month since December. We used his ultrasound machine initially but as it only has a linear probe and a curvilinear probe which has become non-functional in recent times. Vincent then practiced how to do needle guidance using chicken breast phantoms. Following those 2 sessions in December and January we did a basic MSK POCUS session on knee effusion and shoulder effusion in March.

I decided to loan him my old original model GE Vscan device purchased in 2007 which is still working well and was not being used much by me. I delivered it to him in Brisbane at the airport recently on April 14th when he was passing through Australia on a visit to PNG. As such, our last session was starting to learn some basic cardiac ultrasound windows and views just 1 week ago. I have also been providing advice on trying to get his broken curvilinear probe replaced and also we are awaiting a response to a request for several handheld devices.

My plan for the rest of this year is to provide monthly POCUS real-time tele-ultrasound 1hr training sessions where he will be practising basic cardiac ultrasound views and then learning and performing eFAST views. I will be instructing at EMUGs POCUS Fundamentals workshop in Brisbane in late October so I am hoping Vincent is able to come as a participant to that course where myself and other instructors can put some intensive bedside teaching into him in small group POCUS training covering the core EM POCUS modules.

*Dr Allan Whitehead*

I've learnt a lot with Allan's patient coaching. His experience and resolve to achieve something in spite of challenges is inspirational.

Basically so far I've engaged with the US modules on the ACEM website for my background learning and attended a few PEARLS monthly online lectures which I've found very useful.

We have done a few modules - unfortunately limited to linear probe applications because the curvilinear probe of the ED's US machine that I'm using is broken. I am currently waiting for the hospital to pay for a replacement probe.

So far we have gone through:

- Basic knobology
- Vascular access using a homemade phantom
- Joint ultrasound - knees and shoulders
- Cardiac views using the small handheld US machine that Allan loaned to me

Ultimately my aim is to teach my juniors basic POCUS, but I need to get my own competency and confidence up before I can do that effectively.

My biggest advantage of having Allan as a mentor and coach is him being my accountability partner, for which I am eternally grateful.

Attached is the photo of Allan and me taken at Brisbane Airport. I'm still blown away by the fact that he made the trip so that I could continue to learn.

*Dr Vincent Atua*

# People of PEARLS

Each month we will feature a member of our community to learn about their background, interests, their work and, what brings them to PEARLS. We hope this would foster a sense of camaraderie and create opportunities for seeking support and collaboration in the future!

This month we would like to introduce a 'newish' faculty member, Associate Professor Sam Orde, an Intensive Care Specialist and Director of ICU (+ Co-Director of Echo lab) at Nepean Hospital in Western Sydney. 🇺🇸



A/Prof Sam Orde

He has helped run the DDU (Critical Care) exam program for ASUM and also been faculty for EDEC echo exam in Europe and Education lead for ASE Critical Care group.

The ICU team at Nepean hospital has a passion for critical care ultrasound (especially echo), cardiopulmonary research and education.

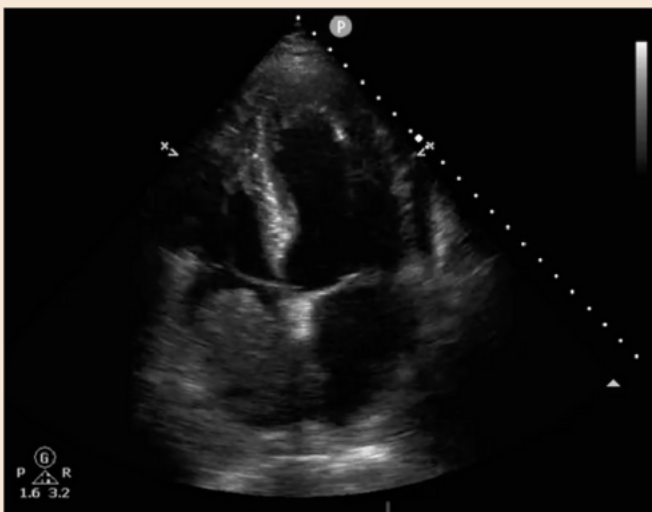
*"I came across PEARLS reviewing a recent paper submitted for publication. Concept of 'training the trainers' and sustainable ultrasound education in resource limited countries is exceptional and potentially highly clinically relevant. I want to help in this space anyway I can."*

*"Sort of" invited myself into the group (thank you Jono and Lewis) and recently went to Vanuatu for first "PEARLS return trip".*

Sam plans to research/audit the PEARLS processes with a view to try to find more resources and hopefully help this incredible initiative succeed in the best possible ways.

***"Being part of PEARLS group is one of the most rewarding projects I've been involved with. I'm incredibly grateful to be working with such a dedicated and passionate group."***

## Inaugural Monthly Image Review session



Huge mass in the right atrium

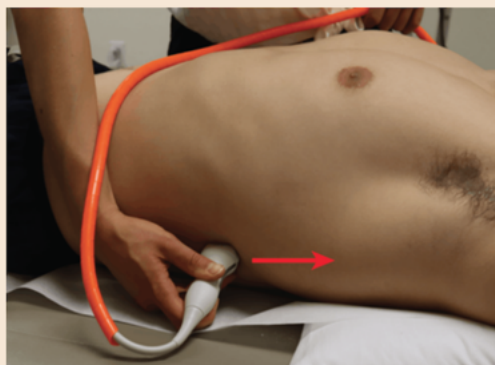
Our Monthly Image Review kicked off last month with the first session held on the 15th April 2024 with 10 attendees.

We had the opportunities to view very interesting scans shared by Dr Matt Born, with quite a few liver cases including cirrhosis, hepatocellular carcinoma and secondary amoebic abscess.

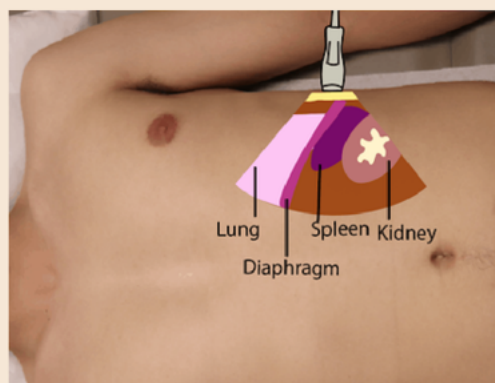
One very interesting case was of a mass in the right atrium secondary to hepatocellular carcinoma (HCC) metastasis (image). The suspected pathophysiological process was due to HCC with local endovascular invasion into the IVC and then into the right atrium, with likely some adherent thrombus. The image series showed a liver mass, IVC tumor, and then the RA mass.

We look forward to having you at our next image review session being held on the 20th May.

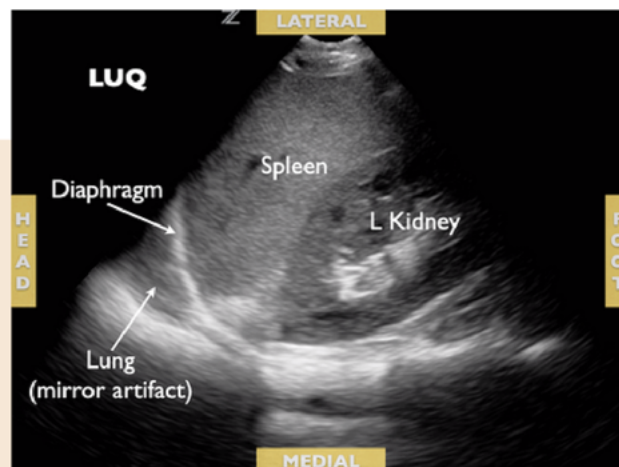
## Tips of the month: Free fluid in LUQ



"Knuckles to the Bed"



Spleen as acoustic window



Normal mirror image artefact

- **Step 1**  
Anchor the probe in the posterior axillary line, around the 8th intercostal space, "knuckles to the bed" position. Move between ribs and rotate probe as needed.
- **Step 2**  
Spleen as an acoustic window to identify spleen, perisplenic space, diaphragm and left kidney
- **Step 3**  
Mirror image artifact above diaphragm is normal, indicating aerated lung
- **Step 4**  
Free fluid often seen in perisplenic space between spleen and diaphragm, NOT spleen and kidney due to a splenorenal ligament stopping the fluid
- **Step 5**  
Asks patient to hold their breath to minimize organ movement

Reference: [https://www.pocus101.com/efast-ultrasound-exam-made-easy-step-by-step-guide/#Step\\_2\\_eFAST\\_Left\\_Upper\\_Quadrant\\_View\\_LUQ](https://www.pocus101.com/efast-ultrasound-exam-made-easy-step-by-step-guide/#Step_2_eFAST_Left_Upper_Quadrant_View_LUQ)  
(accessed 11/05/2024)

## Monthly lecture series

The PEARLS Monthly lecture series is hosted by Bilal Hafeez, on the first Monday of each month at +7AM GMT.

May's lecture was on "Advancing Your POCUS Skills".



Dr Casey Parker in Broome, Australia

### Key takeaways from the lecture:

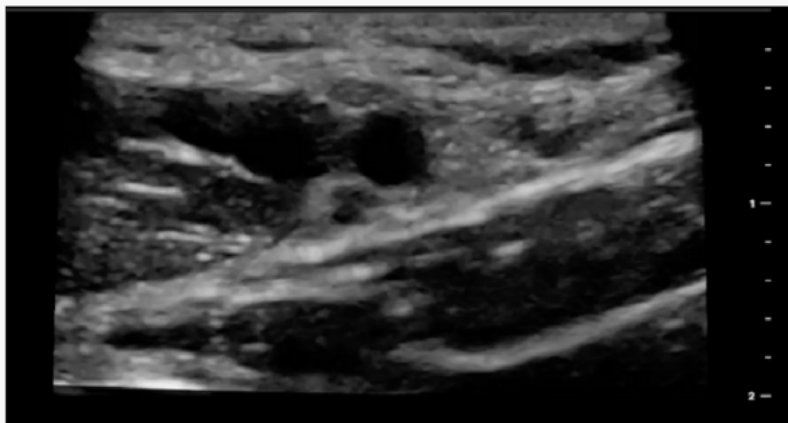
- Fall back on the fundamentals of your POCUS learning when you're stuck.
- Knowing what a "normal" scan looks like is just as important as an abnormal scan - so scan as much as you can!
- **Don't forget:** Patient history and physical examination should guide and supplement your scanning.
- As you master the basics, you will start to slowly grasp the finer details and nuances (and even move into the realm of incidental findings!) - so keep practising!

The next lecture is on Monday 3rd June: Dr Jessica Schmidt, "Top tips for global POCUS".

For recordings of previous presentations, please visit our Youtube channel: [https://www.youtube.com/@PEARLS\\_POCUS](https://www.youtube.com/@PEARLS_POCUS)

# Ultrasound of the month

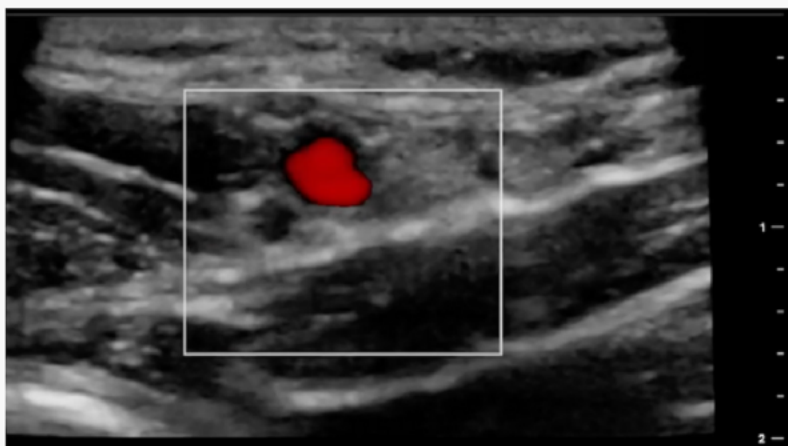
Each month we attempt to feature the most interesting scan uploaded onto our cloud platform. We hope this will be both educational and interesting to all learners and faculties.



This scan is by **Dr Micah Misivet** (PNG), conducted on a patient with hand abscess requiring an axillary nerve block.

**Comment by Dr Claudiu Radeanu:**

I can see brachial artery and vein. I suspect pectoris muscle at the floor if the view is close to the axilla. When you do a nerve block try to capture how you guide the needle and where you inject the local anesthetic. Also for hand abscess consider medial nerve block at the wrist level (easier to do) or mid-forearm. Good idea to consider nerve block; good skill to have.



**Education notes:**

Axillary nerve block is commonly indicated for moderate-long surgeries of the forearm, wrist or hand with or without an arm tourniquet. The brachial plexus is anaesthetised at the level of the terminal branches thus inducing anaesthesia of the upper extremity from the forearm down.

Reference: <https://www.nysora.com/news/tips-for-an-axillary-brachial-plexus-block-2/> (accessed 11/05/2024)

## T@g an expert

To maximise the wealth of expertise and knowledge within the organisation, we are running the “T@g an expert” initiative! For difficult scans, both learners and faculty can T@g one of our experts in an image comment for their opinions and advice as per below. Due to technical difficulties yet to be resolved by Butterfly, the names of some faculty are not yet included here.

Faculty who’d like to make modifications/additions to this list, please email [pearls.enquiries@gmail.com](mailto:pearls.enquiries@gmail.com)

Name	Happy to be tagged in
@Jonathan Henry	Echo, E-FAST, AAA, bowel
@Katie Newman	Anything except echo
@Jo McCann	Anything except echo
@Lewis McLean	Echo, lung
@Gabriela King	Anything
@Matt Born	Anything
@Ant Allso	Anything
@Darsim Haji	Echo, lung
@Sam Orde	Echo, lung

# Communication board

## Shall I upload or Not?? 🤔

Though we emphasise the importance of storing images, in reality most of us PEARLS faculty have moments at work where we use ultrasound to just take a 'quick look' (naughty, I know!). No doubt you'll all be experiencing the same with your Butterfly probes - we believe what's being uploaded to the cloud is just a small fraction of the scanning happening.

We just want to encourage you to upload as much as possible, so that we can give feedback on your scanning and accelerate your progress! We're all busy in the heat of the moment on clinical shifts, but it should only take an extra minute - remember **BIAS CD** - Before, input Initials, Age and Sex, with some Clinical Details. Then once finished scanning, click *Sign Final*.



Dr Vega Tuen Kauh (front) and Dr Mick Killeen (right wall) in Vanuatu, 2022.



Green bananas in Vanuatu, 2024. Image credit: Jo McCann

## Troubleshooting | Notifications

If you're having issues with your notifications, try to narrow it down to one of the following:

- When you're being tagged, is it **FAILING TO RAISE THE NUMBER** on your 'notifications bell' in the app or website?
  - If so → Please contact Butterfly tech support [support@butterflynetwork.com](mailto:support@butterflynetwork.com)
- The number on the bell is rising, **BUT YOU'RE NOT BEING PINGED ON YOUR PHONE OR EMAIL**. Then the fix could be 1 of 2 things:
  - Personalise your notifications by clicking on Profile Settings in the app or website
  - Check your phone settings, or spam inbox, depending on where you've directed the notifications

# Upcoming events & Developments

## PEARLS

- **13-17th May 2024:** PEARLS-ED & PEARLS-CC in Tonga
- **Oct/Nov 2024:** We're hoping to hold first in-person PEARLS workshops in Honiara, Solomon Islands.
- **18th-22nd Nov 2024** (provisional date): PEARLS Samoa
- **Nov 2024:** We're hoping to hold a PEARLS refresher course around the PMA conference (26-28th Nov) in Christchurch - if travelling, make sure to bring your probe!

## Other updates

- **9th-23rd June:** one of our volunteer medical students, Long Nguyen, is visiting the National Referral Hospital, Honiara, Solomon Islands with a newly acquired Butterfly IQ+ probe and tablet. Under the guidance of Dr Sally Hansen, 4 ED registrars will be trained and familiarised with the Butterfly probe and platform. We hope this will be a pilot project for a potential full workshop in Oct/Nov this year.
- **26th June:** Dr Elise Pascoe is presenting on behalf of PEARLS at the University of Melbourne's Medical Student Conference MDSC 2024 on Medical Education.

## External events:

**7th July 2024:** The ACEM Rural, Regional & Remote Conference in Darwin will include a Progress PoCUS workshop, covering the 5 core topics: eFAST, AAA, Lung, FELS + Procedural. It's essentially a 'finishing school' for clinicians trying to credential via completion of logbooks or recognition of prior learning.

Target audience: Emergency Physicians, CMOs, Trainees, Certificant and Diploma Candidates, and anyone looking to improve their ED POCUS skills.

Mode: In-person only

Cost: \$400/person

Register link: <https://acemrrr2024.com.au/pages/workshops>

## Vacancies

PEARLS has mini-teams working on various projects in the background. We are on the lookout for anyone interested in contributing in these fields:

- Social media - Twitter and beyond
- Funding applications coordinator
- Cloud coordinator
- Industry Liaison
- Newsletter content creator - partnered with medical student team
- Lecture series - speaker recruitment and coordination - partnered with medical student team

Some positions are open to medical students as well. If you're interested, please email us at [pearls.enquiries@gmail.com](mailto:pearls.enquiries@gmail.com).



PEARLS-ED in Tonga 2023



Dr Owen Doran and Dr Alamea Aholelei in Tonga, 2023

## SEND US YOUR STORIES AND PHOTOS

We would love to be able to share your photos and stories from PEARLS workshops or remote-coaching sessions, of you using the Butterfly probes in clinical practice or anything associated with PEARLS.

Have a message for your coach(es)? Successfully master a difficult scan? Scan something impressive? Wearing scrubs that fashionably match the probes? Or anything that excites you!

Please send them to [pearls.enquiries@gmail.com](mailto:pearls.enquiries@gmail.com). 😊



### Contact us

**General enquiries:**

[pearls.enquiries@gmail.com](mailto:pearls.enquiries@gmail.com)

**Monthly Lecture series and Image review sessions:**

[pearls.lectureseries@gmail.com](mailto:pearls.lectureseries@gmail.com)

**Coach coordinator:**

[pearls.coaches@gmail.com](mailto:pearls.coaches@gmail.com)

**Youtube:** [www.youtube.com/@PEARLS\\_POCUS](https://www.youtube.com/@PEARLS_POCUS)

**X:** [twitter.com/PEARLS\\_POCUS](https://twitter.com/PEARLS_POCUS)

**Website:** Coming soon!