

# Choosing your Agenda

---

The HOUSE course was created to deliver the ultrasound education of most value to your community. Part of how we achieve this is to customize a course to suit your needs. The needs of your community are based upon the experience of your physicians, your patient population, and the diagnostic imaging resources you have available. As a result, each community has different needs. Please take a look at the information below and get feedback from your colleagues. Once you've done this, we'd like to discuss this with you.

In addition to learning how to perform a scan, it can also be very helpful to learn and practice how to incorporate that skill into managing your patient at the bedside. For that reason, we offer modules—a full or half day of scanning that is based on a particular disease presentation. While in our experience these complete modules are the best way to learn a new skill, we are also happy to deliver a course with anything from this list.

All courses also include a discussion on how to introduce POCUS into your practice and how to create a quality assurance process. We also discuss other resources available to support your ongoing learning in POCUS.

## List of Modules

### Ultrasound for Shock (7-8 hours)

- Knobology (30 min)
- eFAST (90 min)
- Aorta for Aneurysm (30 min)
- Inferior Vena Cava (30 min)
- Lung: Pneumothorax & Lung Point (30 min)
- Cardiac: Subxiphoid and Parasternal Long Axis (PSLA) views (75 min)
- Deep Vein Thrombosis (DVT) (30 min)
- How to Practice POCUS Safely (15 min)
- **Optional:** Vascular Access (60 min)
- Demo of shock scan (15 min)
- Cases & General Review (60 min)

## Ultrasound for Trauma (7 hours)

- Knobology (30 min)
- eFAST (90 min)
- Cardiac: Subxiphoid view (60 min)
- Lungs: Pneumothorax and lung point (30 min)
- Vascular access (60 min)
- How to Practice POCUS Safely (15 min)
- Long Bone Fracture (15 min)
- Putting it all together (45 min)
- Cases & General Review (60 min)

## Ultrasound for Certification (6.5 - 7 hours)

*This course module qualifies as a Canadian Point-of-Care Ultrasound Society (CPoCUS) approved CORE introductory course, which is the first requirement towards acquiring Independent Practitioner Certification (Core). Further information about IP certification can be found at <http://www.cpocus.ca/ceus-certifications/levels-certification/basicip-1-certification/>.*

- Knobology (30 min)
- eFAST (90 min)
- Cardiac: Subxiphoid view (60 min)
- Lungs: Pneumothorax & Lung Point (30 min)
- Aorta for Aneurysm (30 min)
- Ectopic Pregnancy: Transabdominal approach (60 min)
- **Optional:** transvaginal approach (30 min)
- How to Practice POCUS Safely (15 min)
- Cases & General Review (90 min)

## Ultrasound for Dyspnea (5 hours)

- Knobology (30 min)
- Cardiac: Parasternal Long Axis (PSLA) Views (60 min)
- Lungs: Pulmonary Edema, Pneumothorax & Pleural Effusion (75 min)
- Inferior Vena Cava: Volume Assessment (30 min)
- How to Practice POCUS Safely (15 min)
- Demo of Dyspnea Scan (15 min)
- Putting it All Together (60 min)

## Ultrasound for Abdominal Pain (6.5-7 hours)

- Knobology (30 min)
- Gallbladder: Cholecystitis & Gall Stones (90 min)
- FAST (60 min)
- Renal: Hydronephrosis (30 min)
- Aorta for Aneurysm (30 min)
- Ectopic Pregnancy: Transabdominal Approach (60 min)
- **Optional:** Transvaginal Approach (30 min)
- How to Practice POCUS Safely (15 min)
- Cases & General Review (60 min)

## Ultrasound for Ambulatory Care (3-5 hours)

- Knobology (30 min)
- Soft Tissues & MSK: Abscesses, Foreign Bodies, Hematomas, Tendons, Joints, Dislocations & Fractures (90 min)
- Eye (30 min)
- Vascular access (60 min)
- Deep Vein Thrombosis (30 min)
- Procedures: Paracentesis & Thoracentesis (60 min)
- How to Practice POCUS Safely (15 min)
- Cases & General Review (60 min)

## Application Descriptions

Difficult to become proficient in the skill: Easiest **1** | Moderately difficult **2** | Most difficult **3**

**MSK** **2**, **Skin** **1**, **Eye** **1** (1-2 hours)

Ultrasound of superficial structures is generally easy to perform.

**MSK:** Learn to use ultrasound to improve your diagnostic accuracy of ruptured muscles and tendons, shoulder dislocation, hip joint effusion, joint aspirations, and for fracture diagnosis and during fracture reduction.

**Skin:** Ultrasound is a great tool for use in locating soft tissue foreign bodies, diagnosing abscess versus cellulitis, and abscess aspiration.

**Eye:** Physical examination of the eye can be limited due to pain or trauma. Ultrasound is a valuable tool to assess for potential vision-threatening conditions such as the presence of a foreign body, vitreous hemorrhage, globe rupture, retinal detachment and vitreous detachment.

**Aorta** (0.5 hours) **1**

Is your patient's back pain caused by a ruptured abdominal aortic aneurysm? With a little practice, you can use your POCUS skills to make diagnoses at the bedside, providing you with information vastly superior to clinical skills alone.

**DVT** (1 hour) **1**

Patients with leg pain can be quickly assessed for venous thrombosis. Ultrasound is the gold standard for assessing veins, and the point-of-care ultrasound practitioner can quickly and reliably rule-in or rule-out a DVT. This skill is very easy to learn.

**Extended FAST** (1.5 hours) **2**

The Extended Focused Assessment with Sonography for Trauma (eFAST) is a game changer for the management of trauma patients, and a core skill that all emergency physicians should have. The eFAST will tell you if there is significant free fluid in the abdomen and chest, confirming the diagnosis of hemorrhage in the peritoneal, pericardial or pleural spaces. The eFAST is the initial imaging test of choice in a trauma situation, and one you can perform as part of your primary survey, in only a few minutes. While it is more difficult to learn than some applications, it is an essential one to be skilled in.

**Gallbladder** (1.5 hours) **2**

Point of care ultrasound of the gallbladder can help confirm the diagnosis of both cholecystitis and gallstones.

**Heart** (1-2 hours) **3**

Ultrasound of the heart can be a game changer in the diagnosis and management of the unstable hypotensive patient. With practice, you can determine if there is a significant pericardial effusion, poor cardiac contractility, or the acute right heart strain associated with a large pulmonary embolism. While getting good images can be challenging, it can also be

quite easy. It never hurts to know how to look! This module starts with subxyphoid, moves on to para-sternal long, and could include para-sternal short axis and apical four chamber views as well.

## IVC (0.5 hours) ①

Does your patient need more fluids? Is their shock due to hypovolemia? The IVC scan can provide information regarding the volume status of your patient, and is useful for both diagnosing volume depletion and for monitoring response to fluid therapy.

## Pneumothorax (0.5 hours) ①

It is now widely accepted that ultrasound has a greater sensitivity and specificity than the chest x-ray for the diagnosis of pneumothorax, and takes only seconds to perform. It is also a simple skill to acquire.

## Procedures: Thoracentesis ①, Paracentesis ①, Pericardiocentesis ③ (1 hour)

The use of ultrasound prior to performing diagnostic and therapeutic aspirations of fluid reduces complications. This test will show you how to find the largest pocket of fluid in the pleural space for the thoracentesis; guide the needle into the pericardial space in real time to ensure the myocardium is not punctured; find the deepest pocket of fluid in the abdomen. This skill is easy to learn, and will help you perform these procedures with confidence.

## Renal for hydronephrosis (0.5 hours) ①

If you have FAST skills, it's an easy step to learn how to diagnose the hydronephrosis associated with acute renal colic, and the enlarged bladder of urinary retention. This is a simple skill to learn, and especially valuable in sites that currently have no other means to diagnose renal colic, or in patients who you don't want to expose to radiation.

## Rule out ectopic (1-1.5 hours) ③

The ability to identify an intra-uterine pregnancy, and thus rule out ectopic pregnancy, is a lifesaver for rural physicians faced with an unstable female patient with abdominal pain. It's also very useful in the work up of the stable pregnant patient with abdominal pain. This procedure doesn't take long to learn, and once acquired, has been shown to significantly decrease the time to definitive treatment of ectopic pregnancy. This lesson can use the transabdominal and/or transvaginal approach

## Vascular Access (1 hour) ①

Does the idea of inserting a central line make you break out into a cold sweat? It's easy to learn how to locate the ideal insertion site for a central or peripheral vein catheter with ultrasound, and you can then watch the needle go right into the vein in real time, confirming placement. POCUS for vascular access turns a nerve wracking procedure into one you can perform with confidence. And complication rates go way down too. This is an easy application to learn.