

## Consensus for Pediatric POCUS education in Japan

The following POCUS applications are recommended to be mastered in pediatric emergency care for pediatric residents aiming to become pediatric specialists or equivalent pediatric (emergency) healthcare professionals. The consensus for pediatric POCUS education consists of nine areas: head and neck, lung, heart, abdomen, gastrointestinal, renal-genitourinary, musculoskeletal, ultrasound-guided procedures, and resuscitation.

### 1. Head and neck

- ① Hydrocephalus
- ② Intracranial bleeding (including mid-line shift)
- ③ Lymphadenopathy

### 2. Lung

- ① Normal lung
- ② Pneumothorax
- ③ Hemothorax
- ④ Pleural effusion
- ⑤ Pneumonia

### 3. Heart

- ① Cardiac standstill
- ② Cardiac effusion
- ③ IVC (inferior vena cava) diameter
- ④ Aorta/IVC ratio
- ⑤ Left ventricular contractility: visual ejection fraction (EF)
- ⑥ Pulmonary hypertension: right ventricular shape (D-shape)
- ⑦ Ductus arteriosus

### 4. Abdomen

- ① Intraperitoneal fluid
- ② Cholecystitis
- ③ Cholangiectasis
- ④ Cholecystolithiasis

### 5. Gastrointestinal

- ① Pyloric stenosis
  - ② Malrotation/ midgut volvulus
  - ③ Appendicitis
  - ④ Intussusception
  - ⑤ Bowel obstruction (including to-and-fro pattern)
  - ⑥ Constipation
6. Renal-genitourinary
- ① Hydronephrosis/ hydroureter
  - ② Testicular torsion
  - ③ Epididymitis
  - ④ Urolithiasis
  - ⑤ Inguinal hernia
7. Musculoskeletal
- ① Joint effusion
  - ② Subcutaneous abscess
8. Ultrasound-guided procedures
- ① Peripheral venous line placement
  - ② Central line placement (including PICC)
  - ③ Arterial line placement
  - ④ Confirmation of endotracheal intubation
9. Resuscitation
- ① EFAST (extended focused assessment with sonography for trauma)
  - ② RUSH (rapid ultrasound for shock and hypotension) (including HI-MAP)