

HONG KONG COLLEGE OF RADIOLOGISTS

Higher Subspecialty Training in Ultrasonography

[This document should be read in conjunction with the *Guidelines on Higher Specialist Training (Radiology)*]

1. INTRODUCTION

1.1 As the trainee has been exposed to ultrasound (US) in Basic Specialist Training, during this technique based Higher Specialist Training in US, emphasis will be focused on the following:

- (a) Appropriate use of US in patient management.
- (b) Understand physics and limitation of US.
- (c) When definitive diagnosis is not possible, to choose the next best imaging technique and be able to integrate the US information by recommending the best protocols to answer the clinical problems.
- (d) To use US appropriately to solve problems raised by other imaging modalities.
- (e) In depth knowledge of scanners with latest technology
- (f) Application of US fusion imaging technique and US intravenous contrast study is mandatory

1.2 The trainee must learn a unique set of skills in communication with clinical colleagues and other radiologists because of the following limitations of the technique:

- (a) Demonstration of anatomy is limited
- (b) Confusing artefacts are common

The trainee has to learn how to overcome these limitations.

1.3 Ultrasonography is a Category B subject.

2. OBJECTIVES

2.1 To increase and broaden practical skills particularly in advanced application of the technique, including Doppler studies

2.2 To learn how to best integrate the use of US into a diagnostic imaging plan for each patient

2.3 To communicate and present findings to clinical colleagues and other radiologists systemically in the report including essential findings and relevant measurements

2.4 To be able to interpret Doppler and data generated by other radiologists or sonographers, and to ensure such data are obtained optimally

- 2.5 To have good knowledge of the biological effects of ultrasound and the technique in minimizing the possibility of injury due to inappropriate use of ultrasound
- 2.6 To be able to encourage appropriate use of US
- 2.7 To be able to supervise sonographers with cooperation to ensure optimal quality and efficiency
- 2.8 To have professional knowledge in current development of medical US imaging

3. TRAINING REQUIREMENTS

3.1 TRAINING CENTRE REQUIREMENTS

- 3.1.1 The hospital must have acute clinical units including surgery, medicine, paediatrics, obstetrics and gynecology.
- 3.1.2 The department must have high-end ultrasound unit with a complete range of transducers, colour flow, pulsed Doppler, harmonic, 3D imaging with extended view and fusion imaging capabilities.
- 3.1.3 Hospitals lacking adequate exposure to obstetric ultrasonography must send the trainees to a centre where they will be capable of performing at least 50 fetal scans for anomalies and 25 neonatal ultrasonograms within 3 months. These examinations need to be manually recorded. (In case the trainee has already acquired this experience by going through Higher Specialist Training in Obstetrics and Gynaecology Radiology this can count toward this further US training. The same principle shall apply to other subspecialties such as Paediatrics, Musculoskeletal, etc.)

3.2 TRAINER REQUIREMENTS

As specified in the Guidelines on Higher Specialist Training (Radiology).

3.3 DURATION OF TRAINING

A minimum of three months and maximum of six months.

3.4 DUTY SESSIONS

- 3.4.1 There should be on the average five sessions of ultrasound per week.
- 3.4.2 It is better that there are not more than five in order to give the trainee the best opportunity to practice integration with other modalities during the training period.

3.5 MINIMUM NUMBER OF EXAMINATIONS REQUIRED

3.5.1 The core requirement for 3 months of training:

Examination	RIS* Coding	Requirement
Abdomen & pelvis, Kidneys	3101, 3103	600
Intestine (which includes appendicitis, pyloric stenosis, intussusception)	3102	15
Head & neck	3201, 3204 – 3206	40
Musculoskeletal	3221 – 3299	30
Extremity for DVT	3306, 3309	60
Obstetrics & Gynaecology	Manual record	100
Carotid and vertebral Doppler	3302	50
Scrotum	3210	10
Transvaginal US / Transrectal US (male)	3105, 3106	10
Ultrasound-guided biopsy (at least 5 cases involving fusion technology)		
<i>Abdomen & pelvis</i>	7104, 7105	30
<i>Superficial structures</i>	7104, 7105	80
Ultrasound-guided aspiration / drainage	7109	20
US intravenous contrast study	Manual record	10

**RIS refers to Radiology Information System of Hospital Authority.*

3.5.2 Doppler studies on renal artery (native and graft), peripheral arteries and venous mapping (upper and lower limbs) are encouraged.

3.5.3 Miscellaneous US examinations e.g. eyes (3203), chest (3107, 3108), lower limb arteries (3307) would be advantageous.

3.6 CLINICAL RADIOLOGICAL CONFERENCES AND OTHER MEETINGS

As specified in the Guidelines on Higher Specialist Training (Radiology).

3.7 PRESENTATIONS AND PUBLICATIONS

3.7.1 As specified in the Guidelines on Higher Specialist Training (Radiology).

3.7.2 At least 1 US related clinical audit/ quality assurance activity should be performed.

*Last version endorsed by HKAM Council Meeting on 20 October 2016 and effective from 1 July 2017
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