APPENDIX A

Learning objectives

1.0 Overview of point of care ultrasound (POCUS)
- 1.1 POCUS versus diagnostic imaging
- 1.2 Indications and contraindications for POCUS
- 1.3 Consensus statements of the Canadian Association of Emergency Physicians (CAEP) and Canadian Association of Radiologists (CAR)
- 1.4 POCUS in urology

2.0 Understand how ultrasonic sound creates diagnostic images
- 2.1 Piezoelectric effect and sonographic image formation
- 2.2 Image orientation: longitudinal, depth, and transverse axis
- 2.3 Terminology: echotexture, echogenic, hyperechoic, hypoechoic, homogenous, heterogenous, shadow, enhancement
- 2.4 Image artifacts: acoustic enhancement and posterior shadowing

3.0 Understand ultrasound controls as it pertains to point of care scanning
- 3.1 Focus: beam width and lateral resolution
- 3.2 Gains and time gain compensation: contrast resolution
- 3.3 Depth and scan line density: temporal resolution
- 3.4 Probe descriptions, footprint, and optimal choices
- 3.5 Doppler imaging: principles of doppler, doppler controls, and doppler recognition

4.0 Kidney sonography
- 4.1 Normal sonographic appearances of the kidney
- 4.2 Procedural approach to scanning the kidney
- 4.3 Renal pelvic dilation
- 4.4 Hydronephrosis and grading, hydronephrosis versus parapelvic cysts
- 4.5 Nephrolithiasis
- 4.6 Other findings: cysts, masses, atrophy

5.0 Bladder sonography
- 5.1 Normal sonographic appearances of the bladder
- 5.2 Other bladder findings: bladder nephrolithiasis, bladder thrombus, bladder cancer
- 5.3 Identification of intra-vesicular needles and catheters
- 5.4 Procedural approach to suprapubic catheter insertion

6.0 Testicular sonography
- 6.1 Doppler imaging
- 6.2 Normal sonographic appearances of the testicles
- 6.3 Procedural approach to scanning the testicles
- 6.4 Abnormal appearances of testicular torsion
- 6.5 Other findings: cysts, hydrocele, trauma