**Appendix 1**

**ABA Exam Content Related to Perioperative Ultrasound**

**Primary Certification – Basic Topics**

* Neck (Including Doppler Ultrasound for Central Venous Access)
* Physics of Doppler ultrasound

**Primary Certification – Advanced Topics**

* Ultrasound-Guided Placement of Invasive Catheters (Arterial, Central Venous) and Nerve Blocks
* Peripheral and Autonomic Nerve Blocks: Indications, Contraindications, Techniques, Clinical Assessment, Complications, Use of Nerve Stimulators, Use of Ultrasound
* Heart Function: Heart Tones, Electrocardiogram (ECG), Echocardiography, Doppler, Cardiac Output
* Echocardiography: Technical Aspects, Complications
* Echocardiographic Heart Anatomy: Chambers, Valves, Great Vessels, Pericardium, Basic Transesophageal Echocardiography (TEE) Views
* Diagnosis of Myocardial Infarction and Acute Coronary Syndrome; Clinical, ECG, Enzymes, Echocardiography, Nuclear Techniques
* Perioperative Diagnosis and Treatment of Ischemia; ECG, TEE
* Valvular Heart Disease: Diagnosis (Including Echocardiography)
* Cardiac Tamponade and Constrictive Pericarditis: Diagnosis, TEE, PA Catheter
* Pulmonary embolism: Diagnosis, TEE findings

**Maintenance of Certification**

* Monitoring methods: Heart function - heart tones, ECG, echocardiography, cardiac output
* TEE – ischemic heart disease, valve function, emboli detection, congenital heart disease, pericardial fluid/tamponade, ventricular function and preload assessment

**Critical Care Medicine**

* Imaging: Cardiac Ultrasound (TTE, TEE)
* Other Bedside Ultrasound (assessment of intravascular volume, etc.)
* Renal Diagnostic modalities: Angiography, CT/MRI, Diagnostic x-ray, Ultrasound
* Obstetric imaging: ultrasound
* Endocrine imaging: ultrasound
* Gastrointestinal imaging: ultrasound
* Procedures: Ultrasound: Indications, application, Physics of Ultrasound, Interpretation