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BLUEPRINT FOR THE WRITTEN CERTIFICATION EXAMINATIONS

GENERALIST SONOGRAPHER

February 7 2010

This Blueprint applies to the examination that will take place on May 15 2010. It may be modified prior to future examinations, in which case notice will be provided.

INTRODUCTION

As part of the requirements for certification as a Generalist Sonographer, candidates must successfully complete the Generalist Sonographer Examination.

The Generalist Sonographer Examination, consists of three components:

Obstetrical & Gynecological Sonography (OB/GYN)

Abdominal Sonography (AB)

Sonography of the Superficial Structures, Musculoskeletal System & Vascular System (SS/MSK/VAS)

The content of the examination is based upon the National Competency Profile (NCP) for the Generalist Sonographer. This Examination Blueprint identifies the competencies upon which questions will be based (these are referred to as "examinable competencies"). Item numbers and references to Appendices that appear in the Blueprint refer to the corresponding items in the NCP.

The Blueprint also identifies the total number of questions in the examinations, and the approximate distribution of those questions among the examinable competencies.

OBSTETRICAL and GYNECOLOGICAL SONOGRAPHY

THE OB-GYN COMPONENT CONSISTS OF 100 MULTIPLE-CHOICE ITEMS. TIME ALLOWED: 100 MINUTES.		
OBSTETRICS SECTION		
		Examinable competencies
4.2 Use equipment to perform examination utilizing knowledge of principles of physics and instrumentation listed in Appendix 3. (5 - 10% of items)		
	g	Verify correct orientation of transducer.
	q	Measure structures as necessary.
	r	Measure M-mode tracings.
5.1 Plan examination procedures utilizing knowledge of structures and conditions listed in Appendix 2.1 (5 - 10% of items)		
	a	Interpret history, signs & symptoms and other relevant information.
	c	Modify scope of examination based on clinical history.
	d	Formulate sonographic scanning strategies.
	e	Integrate knowledge of anatomy and disease processes.
5.2 Integrate relevant available diagnostic data. (5 - 10% of items)		
	a	Correlate results from laboratory tests
	b	Correlate results from aspirations and biopsies.
	c	Correlate results from amniocentesis.
	d	Correlate results from chorionic villus sampling.
	e	Correlate results from chromosome analysis.
	f	Correlate results from dilatation and curettage.
	g	Correlate results from radiography.
	h	Correlate results from angiography.
	i	Correlate results from computerized tomography.
	j	Correlate results from nuclear medicine studies.
	k	Correlate results from magnetic resonance studies.
	o	Correlate results from non-stress testing.
5.3 Obtain high quality images. (5 - 10% of items)		
	c	Evaluate images for orientation, identification, and labeling.
	d	Analyze and evaluate images for quality.
	e	Modify scope of examination based on sonographic findings.
5.4 Provide technical analysis of sonographic data for physician interpretation, utilizing knowledge of structures and conditions listed in Appendix 2.1 (10 - 25% of items)		
	a	Differentiate artifact from anatomic and pathologic findings.
	b	Differentiate normal variants from pathology.
	c	Use spatial reasoning to interpret images.
	d	Formulate and prioritize differential findings.

OBSTETRICAL and GYNECOLOGICAL SONOGRAPHY

	e	Formulate technical impression.
7.1 Perform obstetrical sonography. (10 - 25% of items)		
	b	Differentiate sonographic appearance of normal structures from anomalous and pathologic conditions.
	c	Recognize sonographic appearance of anomalous and pathologic conditions listed in Appendix 2.1.
GYNECOLOGY SECTION		
Examinable competencies		
4.2 Use equipment to perform examination utilizing knowledge of principles of physics and instrumentation listed in Appendix 3. (1 - 5% of items)		
	g	Verify correct orientation of transducer.
	q	Measure structures as necessary.
5.1 Plan examination procedures utilizing knowledge of structures and conditions listed in Appendix 2.2 (5 - 10% of items)		
	a	Interpret history, signs & symptoms and other relevant information.
	c	Modify scope of examination based on clinical history.
	d	Formulate sonographic scanning strategies.
	e	Integrate knowledge of anatomy and disease processes.
5.2 Integrate relevant available diagnostic data. (1 - 5% of items)		
	a	Correlate results from laboratory tests
	b	Correlate results from aspirations and biopsies.
	c	Correlate results from amniocentesis.
	d	Correlate results from chorionic villus sampling.
	e	Correlate results from chromosome analysis.
	f	Correlate results from dilatation and curettage.
	g	Correlate results from radiography.
	h	Correlate results from angiography.
	i	Correlate results from computerized tomography.
	j	Correlate results from nuclear medicine studies.
	k	Correlate results from magnetic resonance studies.
	o	Correlate results from non-stress testing.
5.3 Obtain high quality images. (5 - 10% of items)		
	c	Evaluate images for orientation, identification, and labeling.
	d	Analyze and evaluate images for quality.
	e	Modify scope of examination based on sonographic findings.

OBSTETRICAL and GYNECOLOGICAL SONOGRAPHY

5.4 Provide technical analysis of sonographic data for physician interpretation, utilizing knowledge of structures and conditions listed in Appendix 2.2 (5 - 10% of items)

	a	Differentiate artifact from anatomic and pathologic findings.
	b	Differentiate normal variants from pathology.
	c	Use spatial reasoning to interpret images.
	d	Formulate and prioritize differential findings.
	e	Formulate technical impression.

7.2 Perform gynecological sonography. (10 - 25% of items)

	b	Differentiate sonographic appearance of normal structures from anomalous and pathologic conditions.
	c	Recognize sonographic appearance of anomalous and pathologic conditions listed in Appendix 2.2.

ABDOMINAL SONOGRAPHY

THE AB COMPONENT CONSISTS OF 100 MULTIPLE-CHOICE ITEMS. TIME ALLOWED: 100 MINUTES.		
		Examinable competencies
4.2 Use equipment to perform examination utilizing knowledge of principles of physics and instrumentation listed in Appendix 3 (5 - 10% of items)		
	g	Verify correct orientation of transducer.
	q	Measure structures as necessary.
5.1 Plan examination procedures utilizing knowledge of structures and conditions listed in Appendix 2.3 (10 - 25% of items)		
	a	Interpret history, signs & symptoms and other relevant information.
	c	Modify scope of examination based on clinical history.
	d	Formulate sonographic scanning strategies.
	e	Integrate knowledge of anatomy and disease processes.
5.2 Integrate relevant available diagnostic data. (5 - 10% of items)		
	a	Correlate results from laboratory tests.
	b	Correlate results from aspirations and biopsies.
	g	Correlate results from radiography.
	h	Correlate results from angiography.
	i	Correlate results from computerized tomography.
	j	Correlate results from nuclear medicine studies.
	k	Correlate results from magnetic resonance studies.
5.3 Obtain high quality images. (10 - 25% of items)		
	c	Evaluate images for orientation, identification, and labeling.
	d	Analyze and evaluate images for quality.
	e	Modify scope of examination based on sonographic findings.
5.4 Provide technical analysis of sonographic data for physician interpretation, utilizing knowledge of structures and conditions listed in Appendix 2.3 (10 - 25% of items)		
	a	Differentiate artifact from anatomic and pathologic findings.
	b	Differentiate normal variants from pathology.
	c	Use spatial reasoning to interpret images.
	d	Formulate and prioritize differential findings.
	e	Formulate technical impression.
7.3 Perform abdominal sonography. (25 - 40% of items)		
	b	Differentiate sonographic appearance of normal structures from anomalous and pathologic conditions.
	c	Recognize sonographic appearance of anomalous and pathologic conditions listed in Appendix 2.3.

SONOGRAPHY OF THE SUPERFICIAL STRUCTURES, MUSCULOSKELETAL SYSTEM AND VASCULAR SYSTEM

THE SS-MSK-VAS COMPONENT CONSISTS OF 80 MULTIPLE-CHOICE ITEMS. TIME ALLOWED: 80 MINUTES.		
SUPERFICIAL STRUCTURES SECTION		
		Examinable competencies
5.1 Plan examination procedures utilizing knowledge of structures and conditions listed in Appendix 2.4 (10 - 25% of items)		
	a	Interpret history, signs & symptoms and other relevant information.
	c	Modify scope of examination based on clinical history.
	d	Formulate sonographic scanning strategies.
	e	Integrate knowledge of anatomy and disease processes.
5.2 Integrate relevant available diagnostic data. (1 - 5% of items)		
	a	Correlate results from laboratory tests
	b	Correlate results from aspirations and biopsies.
	g	Correlate results from radiography.
	h	Correlate results from angiography.
	i	Correlate results from computerized tomography.
	j	Correlate results from nuclear medicine studies.
	k	Correlate results from magnetic resonance studies.
5.3 Obtain high quality images. (5 - 10% of items)		
	c	Evaluate images for orientation, identification, and labeling.
	d	Analyze and evaluate images for quality.
	e	Modify scope of examination based on sonographic findings.
5.4 Provide technical analysis of sonographic data for physician interpretation, utilizing knowledge of structures and conditions listed in Appendix 2.4 (1 - 5% of items)		
	a	Differentiate artifact from anatomic and pathologic findings.
	b	Differentiate normal variants from pathology.
	c	Use spatial reasoning to interpret images.
	d	Formulate and prioritize differential findings.
	e	Formulate technical impression.
7.4 Perform sonography of superficial structures. (25 - 40% of items)		
	b	Differentiate sonographic appearance of normal structures from anomalous and pathologic conditions.
	c	Recognize sonographic appearance of anomalous and pathologic conditions listed in Appendix 2.4.

SONOGRAPHY OF THE SUPERFICIAL STRUCTURES, MUSCULOSKELETAL SYSTEM AND VASCULAR SYSTEM

MUSCULOSKELETAL SECTION		
		Examinable competencies
4.2 Use equipment to perform examination utilizing knowledge of principles of physics and instrumentation listed in Appendix 3. (1 - 5% of items)		
	g	Verify correct orientation of transducer.
	q	Measure structures as necessary.
5.1 Plan examination procedures utilizing knowledge of structures and conditions listed in Appendix 2.5 (1 - 5% of items)		
	a	Interpret history, signs & symptoms and other relevant information.
	c	Modify scope of examination based on clinical history.
	d	Formulate sonographic scanning strategies.
	e	Integrate knowledge of anatomy and disease processes.
5.3 Obtain high quality images. (1 - 5% of items)		
	c	Evaluate images for orientation, identification, and labeling.
	d	Analyze and evaluate images for quality.
	e	Modify scope of examination based on sonographic findings.
5.4 Provide technical analysis of sonographic data for physician interpretation, utilizing knowledge of structures and conditions listed in Appendix 2.5 (1 - 5% of items)		
	a	Differentiate artifact from anatomic and pathologic findings.
	b	Differentiate normal variants from pathology.
	c	Use spatial reasoning to interpret images.
	d	Formulate and prioritize differential findings.
	e	Formulate technical impression.
7.5 Perform basic musculoskeletal sonography. (1 - 5% of items)		
	b	Differentiate sonographic appearance of normal structures from anomalous and pathologic conditions.
	c	Recognize sonographic appearance of anomalous and pathologic conditions listed in Appendix 2.5.

SONOGRAPHY OF THE SUPERFICIAL STRUCTURES, MUSCULOSKELETAL SYSTEM AND VASCULAR SYSTEM

VASCULAR SECTION		
		Examinable competencies
4.2 Use equipment to perform examination utilizing knowledge of principles of physics and instrumentation listed in Appendix 3. (1 - 5% of items)		
	g	Verify correct orientation of transducer.
	q	Measure structures as necessary.
5.1 Plan examination procedures utilizing knowledge of structures and conditions listed in Appendix 2.7.a. (5 - 10% of items)		
	a	Interpret history, signs & symptoms and other relevant information.
	c	Modify scope of examination based on clinical history.
	d	Formulate sonographic scanning strategies.
	e	Integrate knowledge of anatomy and disease processes.
5.3 Obtain high quality images. (5 - 10% of items)		
	c	Evaluate images for orientation, identification, and labeling.
	d	Analyze and evaluate images for quality.
	e	Modify scope of examination based on sonographic findings.
5.4 Provide technical analysis of sonographic data for physician interpretation, utilizing knowledge of structures and conditions listed in Appendix 2.7.a (5 - 10% of items)		
	a	Differentiate artifact from anatomic and pathologic findings.
	b	Differentiate normal variants from pathology.
	c	Use spatial reasoning to interpret images.
	d	Formulate and prioritize differential findings.
	e	Formulate technical impression.
7.7 Perform vascular sonography. (10 - 25% of items)		
	b	Differentiate sonographic appearance of normal structures from anomalous and pathologic conditions.
	c	Recognize sonographic appearance of anomalous and pathologic conditions listed in Appendix 2.7.a