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Examination Overview

RPhS

Registered Phlebology Sonographer



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Registered Phlebology Sonographer (RPhS)

This Examination Overview booklet is meant to assist you as a prospective candidate of the Registered Phlebology Sonographer (RPhS) credentialing program. It provides an overview of the Qualification Requirements and Examination Content. For more details on CCI policies, the testing process, and procedures to submit an application, please visit www.cci-online.org to view or download the Applicant Handbook. **Examination fee is \$365 USD and all exam fees include a \$100 USD non-refundable filing fee.**

All applicants must meet the following criteria: **1)** Have a high school diploma or general education diploma at the time of application; **2)** Fulfill one (1) of the qualifications of the exam for which you are applying. See qualifications listed in the tables below; **3)** Provide typed documentation to support the qualification under which you are applying. Required documentation for each qualification is listed below. CCI reserves the right to request additional information.

Qualification Requirements – Non Physician Applicants

Qualification Prerequisite	Supporting Documentation
<p>RPhS1 Hold an active RVS or RVT credential plus six (6) months (full-time or full-time equivalent) of diagnostic ultrasound employment experience in venous disease at the time of application. AND 36 CEUs in last four (4) years (from date of application) documented in venous disease, ultrasound diagnosis, or vascular anatomy.</p>	<p>RPhS1 Employment Verification Letter (from a supervising physician or credentialed lab director) AND Verification of status as “ACTIVE” from appropriate credentialing agency (example-copy of registrant card) AND CME Documentation</p>
<p>RPhS2 An associate degree or equivalent college hours (62 semester hours) in health, science, natural science, nursing, engineering, or any primary science and one (1) year (full-time or full-time equivalent) diagnostic ultrasound employment experience in venous disease. AND 36 CEUs in last four (4) years (from date of application) documented in venous disease, ultrasound diagnosis, or vascular anatomy</p>	<p>RPhS2 Completion certificate and/or educational transcripts AND Employment Verification Letter AND CME Documentation</p>
<p>RPhS3 A baccalaureate degree in health, science, natural science, nursing, engineering, or any primary science and six (6) months (full-time or full-time equivalent) of diagnostic ultrasound employment experience in venous disease at the time of application. AND 36 CEUs in last four (4) years (from date of application) documented in venous disease, ultrasound diagnosis, or vascular anatomy</p>	<p>RPhS3 Completion certificate and/or educational transcripts AND Employment Verification Letter AND CME Documentation</p>
<p>RPhS4 Two years (full-time or full-time equivalent) employment experience in diagnostic ultrasound in venous disease at the time of application. AND 36 CEUs in last four (4) years (from date of application) documented in venous disease, ultrasound diagnosis, or vascular anatomy Effective June 30, 2023, the RPhS4 qualification prerequisite will be sunset. First-time RPhS applicants applying on or after July 1, 2023 must select from the other qualification prerequisites.</p>	<p>RPhS4 Employment Verification Letter AND CME Documentation</p>

Qualification Requirements – Physician, Physician Assistant, and Nurse Practitioner Applicants

Qualification Prerequisite	Supporting Documentation
<p>RPhS567 Valid license to practice as a Physician Assistant or Nurse Practitioner AND Six (6) months (full-time or full-time equivalent) of diagnostic ultrasound employment experience limited or complete venous ultrasound studies at the time of application.</p>	<p>RPhS567 Copy of License AND Employment Verification Letter</p>
<p>RPhS5 Valid license to practice medicine at the time of application AND Hold certification through the American Board of Venous and Lymphatic Medicine or hold an active RVS, RVT, or RPVI credential AND Diagnostic ultrasound experience in venous disease indicated by performing or directly supervising a minimum of 150 venous studies within the two years prior to the application.</p>	<p>RPhS5 Copy of Medical License AND Verification of status as “ACTIVE” from appropriate credentialing agency (example-copy of registrant card) AND Notarized letter from a supervising physician, credentialed lab director, or office manager that verifies the number of venous studies performed or directly supervised and the period of time during which the studies were performed. (Physicians in solo practices may sign off on their own letters.)</p>
<p>RPhS6 Valid license to practice medicine at the time of application AND Diagnostic ultrasound experience in venous disease indicated by performing or directly supervising a minimum of 200 venous studies within the two years prior to the application.</p>	<p>RPhS6 Copy of Medical License AND Notarized letter from a supervising physician, credentialed lab director, or office manager that verifies the number of venous studies performed or directly supervised and the period of time during which the studies were performed. (Physicians in solo practices may sign off on their own letters.)</p>
<p>RPhS7 Valid license to practice medicine at the time of application AND Completion of a residency or fellowship that includes specialized clinical training in phlebology ultrasound performance and interpretation. Performance or direct supervision of a minimum of 200 venous ultrasound studies during the training program.</p>	<p>RPhS7 Copy of Medical License AND Completion certificate and/or educational transcripts AND Notarized letter from program director/supervisor that verifies the program’s length, the number of studies, and the period during which the studies were performed.</p>

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Examination Matrix

This examination matrix is provided to illustrate the general distribution of questions and the relative weight or emphasis given to a skill or content area on the examination.

Content Category	Approximate % of Exam
A. Maintain Information, Facility, and Safety	9%
B. Patient Diagnosis	27%
C. Performance of Diagnostic Testing	36%
D. Conservative Treatment / Therapy of Patients	9%
E. Minimally Invasive and Invasive Treatment of Patients	20%
Total	100%

Knowledge List

The list below describes general areas of knowledge that are needed in order to perform the tasks identified. This knowledge will apply across multiple tasks.

Regulatory and Compliance Standards (e.g. OSHA, HIPAA, informed consent, medical records)	History and physical	Nonsurgical interventions (e.g., medications, risk factor modification)
Medical ethics	<ul style="list-style-type: none"> Vascular signs and symptoms Risk factors (family history, genetics) CEAP classification Pre- and post-treatment 	<ul style="list-style-type: none"> Sclerotherapy (visual and ultrasound-guided) Compression therapy Physical therapy
Medical terminology	Basic Life Support (BLS)	Open-surgical venous procedures
General anatomy	Safety practices for patients and staff	Minimally invasive and invasive venous procedures
Cardiovascular anatomy and physiology (normal and abnormal)	<ul style="list-style-type: none"> Universal precautions/infection control Sterile procedure Ergonomics 	<ul style="list-style-type: none"> Thermal and non-thermal ablation Phlebectomy Venous stenting Ligation
Venous anatomy, physiology, and pathophysiology	Ultrasound physics	Other testing modalities (e.g., CT, MR, plethysmography)
Vascular hemodynamics	<ul style="list-style-type: none"> Ultrasound instrumentation Ultrasound modalities (e.g., spectral Doppler, color Doppler, B-mode) 	Exam correlation with other imaging modalities
Venous disease process and progression	Vascular anomalies and normal variances	Complications of venous treatment
Diagnosis and treatment of lymphatic disease		
Basic math and statistical skills (formulas, exponents, decimals, scientific notation)		
Basic pharmacology		

Task List

The task list below describes the activities which a Registered Phlebology Sonographer is expected perform on the job. All examination questions are linked to these tasks.

Duties and Tasks	Approx. % of Exam	Duties and Tasks	Approx. % of Exam
A Maintain Information, Facility, and Safety	9%	6 Perform Lower Extremity Venous Duplex Study	
1 Collect Patient Identifiers		7 Perform Upper Extremity Venous Duplex Study	
2 Utilize Universal Precautions and Sterile Techniques		8 Document Exam Findings	
3 Implement Facility Emergency Protocols		9 Communicate Unusual or Abnormal Findings	
4 Inspect Electromechanical Equipment and Perform Preventative Maintenance		D Conservative Treatment/Therapy of Patients	9%
5 Optimize Workspace and Ergonomics		1 Knowledge of Conservative Treatment(s)	
6 Facilitate Continuous Quality Improvement		2 Knowledge of Compression Therapy	
7 Secure and Archive Patient Information		3 Knowledge of the Treatment of Lymphedema and Lipidema	
B Patient Diagnosis	27%	4 Knowledge of Pharmaceutical Therapy	
1 Triage Patient Status		E Minimally Invasive and Invasive Treatment of Patients	20%
2 Obtain Comprehensive Patient History (incl. social history)		1 Confirm Signed Informed Consent	
3 Perform Pertinent Physical Exam		2 Knowledge of Visual Sclerotherapy	
4 Review Post-Treatment Status (e.g., according to past venous history)		3 Assist in Ultrasound Guided Procedures	
5 Establish Differential Diagnoses (incl. comorbidity and medications)		4 Assist in Minimally Invasive Superficial Venous Treatment (e.g., phlebectomy, ablation, ligation)	
6 Assist in Formulating a Diagnostic Plan		5 Evaluate Patient Pre and Post Open Surgical Procedure	
7 Analyze Patient Data		6 Evaluate Patient Pre and Post Superficial Venous Intervention	
8 Assist in Formulating a Treatment Plan		7 Evaluate Patient Pre and Post Catheter Directed Deep Venous Intervention	
C Performance of Diagnostic Testing	36%	8 Evaluate Patient Pre and Post Catheter Directed Abdominopelvic Venous Intervention	
1 Confirm Indications for Study		9 Use of Patient and/or Physician Reported Outcome Measures	
2 Position Patient		10 Provide Patient Discharge Instructions	
3 Select Appropriate Equipment and Optimize Settings		Total	100%
4 Select Appropriate Transducer and Optimize Frequency			
5 Perform Abdominopelvic Venous Duplex Study			

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Sample Questions

- Pulsatility on spectral doppler is consistent with**
 - AV fistula
 - Iliac occlusion
 - Patent foramen ovale
 - Great saphenous vein aneurysm
- Ultrasound guided foam sclerotherapy**
 - Is less effective than liquid sclerotherapy
 - Is commonly used for telangiectasia and reticular veins less than 2mm in diameter
 - Is frequently associated with neurologic side effects
 - Is effective in the treatment of incompletely ablated saphenous veins
- Spectral Doppler reveals phasic venous flow in the right common femoral vein and aphasic flow in the left common femoral vein. What is the MOST LIKELY pathologic finding?**
 - Left iliac vein stenosis
 - Right iliac vein stenosis
 - Left femoral vein stenosis
 - Right femoral vein stenosis
- The rate of post-procedural paresthesia is REPORTED to be elevated following:**
 - ambulatory phlebectomy of anterior thigh varicosities.
 - ambulatory phlebectomy of posterior thigh varicosities.
 - endovenous thermal ablation of distal small saphenous vein.
 - endovenous thermal ablation of proximal small saphenous vein.
- A 50-year-old male patient presents with a long standing history of leg pain and swelling. Diagnostic studies reveal a venous refill time of 7 seconds and duplex ultrasound shows an 11 mm incompetent great saphenous vein. What additional finding may one expect to find on a physical exam?**
 - toe ulcer
 - heel ulcer
 - medial malleolar ulcer
 - lateral malleolar ulcer

Answers:

1. a 2. d 3. a 4. c 5. c

RPhS References

The textbooks listed below are intended as recommended resources when preparing for examination. You may have previous or later editions of these or other references available that also present acceptable coverage of the subject matter. Any general text in vascular or venous techniques, evaluation, and patient care and management may be used. It is not necessary to use all of the texts identified. They are provided as suggestions only. CCI does not endorse or recommend any third-party review course or material.

- Belanger, Ann C. *Vascular Anatomy and Physiology: An Introductory Text*. Davies Publishing.
- Bergan, John J., and Cynthia K. Shortell. *Venous Ulcers*, 2nd edition. Amsterdam: Elsevier Academic Press.
- Bergan, John J. and Bunke-Paquette, Nisha. *The Vein Book*, 2nd edition. Oxford University Press.
- Goldman, Mitchel P. *Sclerotherapy: Treatment of Varicose and Telangiectatic Leg Veins*. Elsevier.
- Kupinski, Ann Marie. *The Vascular System*, 3rd edition (Diagnostic Medical Sonography Series). LWW.
- Rumwell, Claudia and McPharlin Michalene. *Vascular Technology: An Illustrated Review*. Davies Publishing.
- Size, Gail P, Lozanski, Laurie, Russo, Troy. *Inside Ultrasound Vascular Reference Guide*, Inside Ultrasound, Inc.
- Weiss, Robert A., Craig Feied, and Margaret A. Weiss. *Vein Diagnosis & Treatment: A Comprehensive Approach*. McGraw-Hill.
- Forrestal, Mark and Neuhardt, Diana. *Fundamentals of Phlebology*. American College of Phlebology.

Online Self-Assessment Practice Examinations are available for purchase for self-evaluation purposes. It is important to note that the results of the self-assessment exam do not guarantee or indicate individual success on the CCI exam, nor should the self-assessment serve as the only means for preparing for the CCI examination. **To order the self-assessment examinations online visit www.cci-online.org.**

CCI Applicant Handbook is required reading prior to applying for a CCI exam. Included is important information regarding the application policies, CCI procedures, and the testing process. **Download at www.cci-online.org/applicanhandbook.**