



Table of Contents

Introduction..... 1

Candidate Eligibility Requirements..... 3

Examination Application..... 4

Examination Administration..... 4

Special Accommodations for Examination Administration..... 5

Examination Language Policy..... 6

Examination Registration..... 6

Examination Rules..... 7

Examination Scoring..... 8

Examination Results..... 9

CLT-LANA® Credentials and Professional Registry..... 9

Examination Retake Policies..... 9

Examination Appeals..... 10

Grounds for Revocation of Certification..... 11

Recertification Policy..... 12

Appendices

 Ethics Policy..... 15

 Privacy/Confidentiality Policy..... 16

 Examination Specifications and Content Outline..... 17

 Acronyms & Synonyms..... 22

 Starling’s Principle of Fluid Exchange..... 23

 Sample Examination Items..... 24

 Reading List..... 26

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Introduction

LANA® is a non-profit corporation composed of healthcare professionals, including physicians, nurses, physical therapists, occupational therapists, and massage therapists experienced in the field of lymphology. LANA® is committed to protecting the public, practitioners, and patients through the accomplishment of the following primary goals:

- ❑ Develop, establish, and maintain standards of qualification for persons who specialize in the treatment of lymphatic disorders;
- ❑ Develop, establish, and maintain appropriate certification examinations to ensure minimum levels of acceptable competence fundamental to the proper treatment of lymphedema; and,
- ❑ Develop, establish, and maintain standards of knowledge, skill, and programs to promote continuing competence among registrants.

This booklet is intended to provide candidates for the LANA[®] Certified Lymphedema Therapist (CLT-LANA[®]) examination with the appropriate information and sources to assist in their preparation for the test. It is NOT intended to be used as a study tool for the examination. The purpose of the booklet is to provide the candidate with information on eligibility criteria, the application process, the content areas to be tested, the format of the test, the scoring process, and other useful information. LANA[®] encourages candidates to read the entire booklet in preparation for the examination.

The certification examination described in this booklet is one of the mechanisms employed by LANA[®] to meet its objectives of offering certification opportunities to practicing therapists. To this end, LANA[®] administers the examination process by: defining and updating bodies of knowledge; conducting field surveys; analyzing candidate performance; evaluating subject areas and item validity; developing testing questions; establishing levels of minimum acceptable competence; implementing grading and rating procedures; reviewing education and practice requirements; and identifying public health, safety, and welfare issues.

With this in mind, extensive research has gone into defining the important tasks conducted by therapists, developing, and validating the examination specifications and developing and participating in pre-testing, analysis, and standard setting. LANA[®]'s examination development partner Schroeder Measurement Technologies, Inc. (SMT)'s professional test developers oversee the focus groups charged with developmental tasks in accordance with test specifications and also conduct various ongoing statistical analyses designed to measure the validity and reliability of committee outputs.

The measurement methodologies employed in the examination development and scoring processes conform to all relevant standards and best practices governing such matters. The LANA[®] examinations are professionally developed and adhere to professional standards such as those promulgated by ISO/IEC (17024), The National Commission for Certifying Agencies (NCCA), the *Standards for Educational and Psychological Testing* of the American Psychological Association (APA), American Educational Research Association (AERA), and the National Council on Measurement in Education (NCME).

The LANA[®] Certified Lymphedema Therapist (CLT-LANA[®]) Credential Philosophy

Designation as a Certified Lymphedema Therapist through LANA[®] (CLT-LANA[®]) is meant to assure stakeholders (the public, employers, patients, and regulators) that the credentialed professional has demonstrated an established level of competence in the field. Applying research performed in the development of the CLT-LANA[®] credentialing program, candidates are measured against standards reflecting competence in the role as it is practiced today.

The goal of the CLT-LANA[®] program is to:

- Provide a means for lymphedema therapists to demonstrate the critical knowledge, skills, and abilities necessary to protect the public.
- Establish legally-defensible, valid, and reliable criteria against which competence as a CLT-LANA[®] may be measured.
- Encourage personal and professional growth.
- Recognize those who demonstrate and maintain competence as a CLT-LANA[®].
- Serve patients, employers, and the public by encouraging standards-based lymphedema therapy services of the highest quality.

- Provide a national registry of CLT-LANA[®]s; serving the stakeholder need to identify lymphedema therapists who are nationally certified.

Statement of Impartiality

LANA[®] provides an objective and balanced certification awarding service. LANA[®] adheres to transparent procedures based on ISO/IEC Standard 17024, which contain checks and balances to ensure the objectivity of the certification activities. LANA[®]'s Policies and Procedures and the Bylaws address potential and actual Conflicts of Interest (COI). Our organizational structure is designed to manage any COI and to ensure the objectivity of our Board of Directors and the LANA[®] Certification Examination.

Statement of Non-discrimination

LANA[®] does not discriminate in the participation in the CLT-LANA[®] Certification Program and prohibits discrimination against its candidates, certified persons, employees, and volunteers on the basis of race, color, national origin, age, disability, sex, gender identity, religion, and where applicable, political beliefs, marital status, or sexual orientation.

Candidate Eligibility Requirements

A CANDIDATE MUST:

- ❑ Possess a current and unrestricted U.S. state professional license or registration or equivalent Canadian provincial or territorial license or registration as a Registered Nurse (RN), Occupational Therapist (OT), Certified Occupational Therapy Assistant (COTA), Physical Therapist (PT), Physical Therapist Assistant (PTA), Medical Doctor (MD), Doctor of Osteopathic Medicine (DO), Doctor of Chiropractic (DC), Massage Therapist (MT), or Certified Athletic Trainer (CAT/ATC). Massage Therapists who do not hold a current unrestricted state license or registration (or Canadian equivalent) must be certified by the National Certification Board for Therapeutic Massage and Bodywork **OR** provide documented evidence of having successfully completed a curriculum containing a minimum of 500 hours of soft tissue massage, from an accredited institution.
 - ❑ Provide proof of successful completion of qualified instructional course in Complete Decongestive Therapy (CDT) course work (consisting of 1/3 theoretical instruction and 2/3 practical lab work and documentation of 135-classroom hours) from no more than four consecutive or cumulative courses from one training program. Practical lab work is defined as real-time instruction with an instructor present. An instructional video that a student watches during home study would NOT be counted as part of the expected 2/3 practical lab work. Proof is accepted in the form of a computer certificate or letter from the school director.
 - ❑ Provide proof of basic science requirement completion consisting of 12 credit hours (i.e. four, three-credit courses or three, four-credit courses which equal 192 clock hours) of college level human anatomy, physiology, and/or pathology from an accredited college or university. Copy of transcript must be submitted with application form. (Note: a three-credit course meets three hours per week for 16 weeks for a total of 48 clock hours). Science courses taken within a massage therapy curriculum do not count toward the required hours.*
-

*Note: The science requirement is automatically met by those who provide current unrestricted state licenses or registrations from the following disciplines: RN, OT, COTA, PT, PTA, MD, DO, DC, and MT trained in Canada in a 2200-hour program. These individuals should **not** submit transcripts.

Examination Application

Candidates who meet all requirements for eligibility and have successfully completed a qualified instructional course must complete and submit the application form.

Email documents to admin@clt-lana.org. If unable to email, mail along with payment to the following address:

LANA[®]
PO BOX 16183
St. Louis, MO 63105

Please note the application will NOT be processed unless the candidate includes the following:

- Completed legible application, including all declarations, notifications, and agreements confirming policies and procedures and LANA[®]'s Ethics and Privacy/Confidentiality Policies
- A photocopy of candidate's current professional license, registration, or verification
- A photocopy of CDT course certificate(s) specifying the number of contact hours completed (Do **NOT** send copies of certificates for any activity that does not directly pertain to basic CDT course certification hours. **Review the Candidate Eligibility Requirements section.**)
- For Massage Therapists ONLY: A college transcript with proof of successful completion of science requirements with an exception for Massage Therapists who trained in Canada in a 2200-hour program
- Candidate signature
- Application payment

Do not send application via Fed-Ex or UPS as they are unable to deliver to a Post Office Box. Applications may be sent via USPS Priority Mail however, it is not required.

Examination Administration

If the application is deficient, candidates will be notified via email with an explanation of the problem area(s).

Application Processing

Applications will be processed by LANA[®] within three business days of receipt. If an application is approved, candidates will receive email instructions concerning examination registration procedures from the testing company within 10 business days.

Application Information Changes

If the name, mailing address, email address, and/or telephone number entered on the application changes during the application process, candidates must notify LANA[®] in writing no

later than six days after such change of information. Candidates are responsible for reporting changes, as important correspondence is sent throughout the process, and an application or examination registration may be forfeited in case of faulty contact information. Also, candidates must notify LANA[®] in writing and provide supporting documentation in cases of a legal name change: Please note the name on the identification documents presented at the test site must match the name on file with LANA[®].

Certification of Accuracy, Agreement and Release Authorization

Candidates are required to attest and verify the accuracy of the application and to agree to abide by the LANA[®] Ethics Policy (Appendix 1). Any misrepresentation or misconduct related to the application or examination may result in disqualification for, or revocation of, certification. By applying for the CLT-LANA[®] credential, candidates agree to the terms set forth in the application and this CIB regarding certification requirements and the examination.

Denial of Application

Candidates submitting incomplete applications will be notified in writing of any deficiencies and will be provided 30 days to address issues as described. If the candidate does not complete the application in the 30-day window, the application and supporting documents are destroyed. Any monies paid will be returned and the candidate must re-submit the application in its entirety. Candidates who suspect they may not meet CLT-LANA[®] eligibility requirements are strongly encouraged to contact LANA[®] prior to submitting an application.

Verification of Candidate Eligibility

LANA[®] reserves the right to verify the experience and education attested to by the Candidate. This may be accomplished by a phone interview with employers and/or references, or through verification of education/training transcripts or certificates and/or licenses and registrations. Additional documentation may be requested to support the application attestations.

Special Accommodations for Examination Administration

LANA[®] and the test administrator provide special examination accommodations for candidates who qualify for services in accordance with the Americans with Disabilities Act of 1990 (ADA). If a disability prevents a candidate from taking the examination under normal conditions, special accommodations may be requested. The candidate must submit a written request along with documentation of the disability, as diagnosed by a qualified healthcare professional.

Candidates requesting accommodations may be contacted by LANA[®] to discuss the disability and requested accommodation. In conference with a psychometrician, with consideration of examination security and examination administration guidelines, a reasonable accommodation will be made. Candidates will be notified in writing of the accommodations to be offered.

Appealing Decisions on Special Accommodations:

While it is LANA[®] policy to accommodate special needs requests whenever possible, in the unlikely case LANA[®] denies a request for special testing accommodations, the candidate has the right to appeal the decision according to the following policy and procedure:

1. Resubmitting documentation
2. Written explanation with further explanation
3. Any updated documentation

LANA[®] will review the appeal within 30 days of receipt and, in conference with its testing administrator and psychometric experts, will consider the accommodation request in light of operational considerations and the need to maintain the security of the examinations. The candidate will receive written notice of the decision.

Examination Language Policy

For reasons related to examination standardization, security, and cost, the CLT- LANA[®] examination is offered only in English at this time. If English is not the candidate's primary language, LANA[®] recommends (but does not require) candidates consider sitting for the TOEFL (Test of English as a Foreign Language) examination prior to sitting for the CLT-LANA[®] examination. Scores on the TOEFL[®] will provide a useful gauge to assess if reading and English comprehension skills are adequate to take and potentially pass the CLT-LANA[®] examination. The TOEFL[®] examination is offered at multiple locations, both domestically and internationally, throughout the year at Sylvan Learning Centers[®]. More information is available on the Sylvan website.

Examination Registration

Upon application approval, an authorization email from the examination administration company, Iso-Quality Testing, Inc. (IQT), will be sent to the candidate. This important email will contain instructions for scheduling an examination appointment online and provide a username and password to access the online registration system. If computer access is not available, candidates may contact IQT directly to schedule and examination toll-free at (866) 773-1114. Appointments are available weekdays and some evenings and weekends, depending upon the specific testing center requested.

Once the online scheduling process is completed, the candidate will be prompted to print the admission letter which must be brought to the examination center.

Authorization to take the examination is valid for 12 months from the date of the authorization letter. If the exam is not completed within 12 months of the examination authorization, candidates must reapply for the examination, in its entirety, including the application and the full examination fee.

To cancel or reschedule a scheduled examination, the candidate must call IQT toll-free at (866) 773-1114 **at least five business days prior to the examination date**. Failure to attend the scheduled examination (i.e. no-show) for any reason, or if admittance to the test site is denied due to a failure to adhere to established procedures, the examination and registration fee will be forfeited. All examination fees are non-refundable. Cancellation of the examination **less than five business days prior to the examination date** is not allowed unless one of the following four situations has occurred:

- Jury Duty
- Death in the immediate family (defined as a person's grandparents, parents, spouse, siblings, or children)

- Military Deployment
- Sickness (as documented by a medical professional)

If a candidate experiences one of the situations above, the candidate **MUST** submit documentation to **both** IQT **and** LANA[®] within 10 calendar days of the missed examination date or it will not be considered for a reschedule.

Candidates should arrive at the test center at the time noted on the admission document(s) with the required admission letter. Proper government-issued photo identification is also required for all examinations. The only acceptable forms of identification are: a driver's license, government-issued identification card, or a passport. No other forms of identification will be accepted. **No candidate will be admitted without the required documents. This is true for both original and RETAKE candidates. No walk-in candidates will be admitted.**

If a candidate's name has changed since receiving the examination notice, the candidate must notify LANA[®] prior to taking the exam. In addition, the candidate must bring documentation to the testing center showing the previous name and current name (i.e., divorce decree, court order, marriage license, or notarized affidavit).

After establishing positive identification, candidates will be escorted to a computer station for testing.

Candidates will login using the unique username and password provided on the admission letter. After logging in, a short tutorial is presented, which provides training on how to use the computer mouse or keyboard to take the test. Additionally, the proctor is trained to assist with any questions about how to use the system. The system is extremely user friendly and can be operated with a few key strokes or a computer mouse. Candidates will have five minutes to complete the tutorial. Upon completion, candidates will be prompted to begin the examination. Once the candidate begins the exam and the first item appears, a timer will appear on the screen. Subsequent screens will also display the timer and the amount of time the candidate has remaining to complete the exam. Registered candidates may take a sample test (content is not lymphedema-therapy related) before going to the test site by accessing the testing contractor's website using the following link:

<https://www.iqttesting.com/Default.aspx?FunctionSampleExam&Exam=8>

The system provides an option to "bookmark" questions for review later. At any time, candidates can return to the bookmarked questions, review the questions, change the answers, etc. The test ends when two hours have elapsed or when candidates ask the computer to end the test. The system will then offer a short questionnaire about the experience at the test center (the proctor's behavior, level of service, ease of use, etc.). Scores will be available approximately 60 seconds after test completion.

Examination Rules

- Dress is "business casual."
- Failure to follow test center instructions will result in a candidate's application being voided and forfeiture of the application fee. Conduct that results in a violation of security or disrupts the administration of the examination could result in dismissal from the examination.

Disqualifying behaviors include:

- Creating a disturbance;
 - Aiding or asking for aid from another candidate;
 - Attempting to remove copy, buy, sell, or reproduce any testing materials;
 - Possessing unauthorized test materials;
 - Impersonating another candidate;
 - Using contraband materials or equipment in the testing site;
 - Falsifying or misrepresenting any information provided during the application process;
 - Failing to exit the testing center after completing the examination.
-
- Candidates are prohibited from discussing examination content or possessing reference materials or any other examination information at any time during the **entire** examination period. Discussing the examination content after completing the examination is also prohibited, especially in the testing center as other candidates in the area might be taking a break and may not have completed the examination. Candidates may not attend the examination only to review or audit test materials. Candidates may not copy any portion of the examination for any reason. No unauthorized persons will be admitted into the testing area. Please be further advised that all examination content is strictly confidential. **At no other time, before, during, or after the examination, may a candidate communicate orally, electronically or in writing with any person or entity about the content of the examination or individual examination questions.**
 - Candidates writing on anything other than provided material will be in violation of the security policies above. Reference materials are not allowed in the testing room. All materials provided will be turned in to the proctor at the completion of the exam.
 - Candidates are not allowed to bring personal items including food, beverages or personal possessions and technology (e.g., cellular phones, beepers, headphones, purses) into the testing area. No electrical outlets are available to candidates.
 - While the site climate is controlled to the extent possible, be prepared for either warm or cool temperatures at the testing center to reduce the likelihood of discomfort. Due to limited parking facilities at some sites, please allow ample time to park and reach the testing area.
 - Policy on Fraud: IQT and LANA[®] maintain strict policies to safeguard the security of the examination throughout the administration. Any individual who removes, or attempts to remove, examination materials from the testing site, including memorizing examination questions, is subject to prosecution in addition to sanctions that may include removal of certification and restrictions on future access to the examination. Should IQT and/or LANA[®] determine evidence of cheating, they reserve the right to invalidate test scores and mandate retesting.

Examination Scoring

The examination consists of 120 multiple choice questions with four options, only one of which is correct. Twenty of these questions are included for research purposes only. The research questions are not identified; therefore, candidates must answer all questions to their best ability.

Candidate performance on the examination will be measured against a predetermined standard of knowledge and skills. This standard is the level of knowledge and skills reasonably expected of lymphedema-therapy professionals. Candidates will NOT be measured against the performance of the other individuals taking the examination. This means if everyone who takes the examination meets the standard, everyone will pass. All questions on the examination carry the same weight toward the final score. Since there is no penalty for a wrong answer, it is to the candidate's advantage to answer every question, even if it is a guess.

The passing score for the CLT-LANA[®] examination is set by a national panel of expert representatives in the field of lymphedema. These experts reviewed each examination question, evaluated the difficulty of the question, and made a judgment as to how a professional, having the defined standard of competence, would perform on the question. These judgments were analyzed statistically to determine the passing score.

The examination is designed only to distinguish those who have the minimum requisite knowledge and skills from those who do not. There is no evidence someone who receives a very high score on the examination will be a noticeably better practitioner than someone whose score falls exactly at the passing point. Passing candidates will be informed only that they successfully completed the certification process. Passing candidates will NOT be notified of an actual numeric score. Failing candidates will be provided with an overall numeric, scaled score and diagnostic information concerning content area strengths and weaknesses to be used for future study. Examination scores are converted onto a reporting scale to ensure a common reporting standard across examination forms. The passing grade required is a scaled score of 700 out of a possible 1000 scaled score points. Candidate scores are based solely on the candidate's performance on the certification examination.

Examination Results

Barring any unforeseen, extenuating circumstances, examination results will be provided immediately after the examination at the examination site. Exam results WILL NOT be released over the phone.

CLT-LANA[®] Credentials and Professional Registry

Candidates who achieve a passing score on the certification examination may use the credential CLT-LANA[®] after their names. The CLT-LANA[®] certification mark may be used only as long as the certification is valid, after which time certification may be renewed. Certification is a non-transferable, revocable, limited license to use the certification designation CLT-LANA[®], subject to compliance with LANA[®] rules which may be revised from time to time.

Passing candidates who earn the CLT-LANA[®] credential will have their business contact information listed on the LANA[®] registry within 48 hours, unless a candidate has opted-out of inclusion. Candidates will receive their certification documents from the testing company in approximately eight weeks.

Examination Retake Policies

It is the policy of LANA[®] that any candidate who fails to achieve a passing score on the examination may apply to retake the examination six months after the date of the first examination. The

candidate must contact LANA[®] to re-register. Re-registration includes verification of professional license, contact information, and payment of current exam fee.

Candidates are permitted to take the examination three times in a 24-month period. If a candidate fails to achieve a passing score following three attempts in a 24-month period, the candidate must wait an additional 12 months before becoming eligible to apply to take the examination again. LANA[®] strongly recommends the candidate use this time to complete additional training in CDT.

Examination Appeals

LANA[®] is committed to providing a fair process for appeals and disciplinary action for any candidate or CLT-LANA[®]. The Qualifications/Discipline Committee shall consider all appeals and complaints and take action according to the following rules and regulations.

Grounds for Examination Appeals

Examination candidates have the right to appeal examination results within the following specified criteria in situations restricted to extraordinary circumstances that were properly reported to the testing company's proctor at the time of the exam and:

- Arise coincidentally with the examination administration;
- Are outside the control of the candidate;
- Made the candidate's experience different from other candidates' (related to the examination administration) AND/OR affected the candidate's ability to receive credit for a test question (related to the examination content);
- Were severe enough to account for examination failure.

Unless ALL of the above circumstances are met, no single circumstance, including examination failure, will be considered grounds for appeal. If written documentation of the extraordinary circumstances is not received by LANA[®] and the testing company within five-working days of an examination administration, candidates forfeit the right to appeal.

LANA[®]
PO Box 16183
St. Louis, MO 63105
admin@clt-lana.org

SMT/ISO
Client Relations Manager
25400 US Hwy 19N, Suite 285
Clearwater, FL 33763
www.isoqualitytesting.com/contactus.aspx

Candidates are allowed time and opportunity to comment on individual examination questions, and the overall testing experience during computer-based testing. These comments are reviewed and taken into consideration during psychometric reviews of the examinations and their overall reliability and validity. However, to maintain the security of the examinations, candidates are not able to review the examination, nor have access to the examination key or performance information on individual questions.

A designated LANA[®] staff or Board Member and a member of the Examination Committee, in conjunction with the testing company, shall determine the validity of the appeal based upon the submitted documentation.

Written notification will be sent, through like-correspondence (mail or email) within 10 business days of receipt of the appeal, whether the appeal has been accepted or denied. The review will take place within thirty days of receipt of the appeal.

The Examination Committee shall review the following:

- The statement of appeal
- A statement from LANA[®] staff, Board Member, and/or testing company concerning the examination process relative to the appeal
- Test Center reports and comments submitted at the time of the examination

The candidate will be notified of the decision by written, like-correspondence within five business days of the committee meeting. No member of the LANA[®] Examination Committee will communicate directly with a candidate. Communication concerning the appeal will be made between LANA[®] staff or Board Member and the candidate.

Examination Appeal Decision Options

The Examination Committee may put forth the following decisions based upon evidence presented:

- Accept the appeal
- Reject the appeal
- Alternative Decision with or without additional cost

All decisions of Appeal and Discipline Committee are final.

Grounds for Revocation of Certification
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The Qualifications/Discipline Committee may, at its discretion, suspend or revoke a certificate for cause. When the Committee has evidence that charges against a certification holder are valid, the Committee shall notify the certification holder by certified mail at his or her last known address. The certification holder will have the opportunity to present his or her defense to the Committee in writing according to the terms outlined in the policy. The suspension or revocation shall remain in effect until the LANA[®] Board reviews the case. The Committee has the right to revoke certification if it has substantiated that a CLT-LANA[®] has:

- Falsified information on the application
- Falsified any information requested by the LANA[®] Qualifications/Discipline Committee
- Misused or misrepresented the CLT-LANA[®] credential
- Allowed a professional license to lapse
- Had their license revoked
- Cheated during the certification examination
- Assisted others during the certification examination
- Possessed unauthorized LANA[®] examinations or other confidential materials
- Failed to report a criminal conviction
- Committed gross repeated malpractice

Upon being notified in writing of the belief that one of the above conditions exists, LANA[®] shall contact the CLT-LANA[®] cited (within ten days), indicating this information has been received. The Qualifications/Discipline Committee will review the information and make a determination. If the CLT-LANA[®] disagrees with the initial determination, an appeal may be filed.

The Committee may choose to:

- Reject the finding and take no action, or,
- Accept the findings and revoke the credential.

Once certification has been revoked, the individual therapist's state board of licensing shall be notified of the revocation and the individual therapist shall be barred from taking any future LANA[®] examinations.

Recertification Policy

LANA[®] Certification is valid for six years. Each certificate given to the candidate indicates the expiration date. All certifications expire on December 31st, six years from the last certification date. An individual whose certification is set to expire must submit an application for recertification or an application for inactive status postmarked by December 31st of the year their certification expires. Failure to apply for recertification or apply for inactive status by the deadline will place the individual in expired status. **It is the responsibility of the CANDIDATE to recertify at the appropriate time** (see "Extensions" for additional information).

Application for Recertification:

All candidates for recertification must submit the following:

1. Proof of a current and unrestricted U.S. professional state license, registration or equivalent Canadian provincial or territorial license, or registration as stated in initial certification process
2. A completed recertification application
3. Current recertification fee
4. Documentation of meeting the criteria for recertification as outlined below. **It is the responsibility of the candidate to provide documentation identifying the activities AND hours earned toward recertification.**

Options for Recertification:

Certified therapists may attain recertification status through **ANY** combination of the options listed below as long as the total reaches a **minimum** of 24-contact hours. Documentation of required hours is the responsibility of the candidate. **Options are:**

1. Continuing education. Topics must relate to the management of individuals with lymphedema. Examples include but are not limited to: anatomy or physiology of the lymphatic system, treatment of lymphedema, wound care, therapeutic bandaging/taping, cancer rehabilitation, chronic venous insufficiency, lymphedema self-management programs, and various upper and/or lower extremity courses providing they take into consideration the circulatory system (candidates may be required to show syllabi from

such courses). **Documentation must include a copy of certificate(s) of attendance indicating the name of the continuing education course and MUST show hours earned.**

2. Attendance at a national or international lymphology or lymphedema related conference. **Documentation must include a copy of certificate(s) of attendance indicating the name of the conference and MUST show hours earned.**
3. Teach college-level courses related to lymphedema management. Topics include but are not limited to: anatomy or physiology, lymphedema treatment, therapeutic taping, wound care, vascular and/or integumentary disorders. **Documentation must include course outline with hours in classroom.**
4. Participate in literature reviews available to LANA[®] members only, thru the LANA[®] website. Abstracts of articles are available for review and each article has a corresponding quiz. Candidates must be able to obtain the article; only the abstract is provided. To receive one credit per quiz toward recertification, candidates must score 70% per quiz. Candidates may earn up to 10 credits by completing the quizzes. (Quizzes are not approved for CME/CEU credits by any other organization.)
5. Teach an approved, educational-lymphedema course. Teaching an approved, educational lymphedema course will be counted as two-contact hours for every in-class contact hour. A one-time additional two-contact hour preparation time will be accepted. **Documentation must include course outline with hours in classroom.**
6. Author an article in a peer-reviewed journal, author a chapter in a published book, or edit a multiple-author published book. Authoring an article, authoring a chapter, or editing a book will each be counted as 15-contact hours. **Documentation must include a copy of evidence of completion of the activity.**
7. Make a peer-reviewed poster or platform-research presentation. A peer-reviewed poster or platform-research presentation will be counted as five-contact hours. **Documentation must include a copy of evidence of completion of the activity.**
8. Retake the LANA[®] certification exam (including payment of the full examination fee). Eligible candidates are invited to consider the option of retaking the LANA[®] exam as a means of recertification. No continuing education contact hours are required for individuals taking this option.
9. Participants on LANA[®]'s Examination Committee will be awarded five-contact hours per day towards recertification for exam development meetings (2.5 –contact hours for a half day or two- to four-hour exam development conference calls).

Any of the options listed above can be combined to reach the minimum total of 24 hours required for recertification.

Please check website (www.clt-lana.org) for updates and changes

Inactive Status

Upon petition, an inactive status may be granted on a case-by-case basis. Candidates petitioning for inactive status must submit **in writing** a request for inactive status, stating the

reason for the request. Decisions to grant inactive status and the details regarding what a candidate must do to obtain said status will be made by the Recertification Committee of LANA[®]. The length of the inactive status will also be decided on a case-by-case basis by the Recertification Committee at the time of the request. Individuals who have their certification placed on inactive status will be removed from the LANA[®] website and other LANA[®] relevant materials. Candidates who apply for inactive status must pay the current fee to be placed on inactive status. Once the inactive status has expired, the individual will be required to meet all the current recertification requirements and any requirements stipulated in their inactive status.

Expired Status

Individuals, who do not apply for inactive status and allow their LANA[®] certification to expire, will be required to apply for certification by examination as a noncertified CLT-LANA[®] therapist. Candidates must meet the eligibility requirements for recertification and successfully complete the Certification Examination. Therapists who allow their certification to expire will be removed from the LANA[®] website and other relevant materials.

Extensions

In unusual situations, special extensions may be arranged allowing a candidate to recertify if the deadline has passed, but the request to recertify falls within one year of the original deadline. A candidate in this situation should contact LANA[®] to learn the details of the extension policy. The granting of special extensions is rare and will be determined by the Recertification Committee of LANA[®].

Ethics Policy

It is the policy of LANA[®] that its CLT- LANA[®] members and Board Members uphold the highest standards of ethical, professional behavior. To that end, LANA[®] members and Board Members shall dedicate themselves to carrying out the mission of the organization and shall demonstrate:

Integrity in actions

- Demonstrate the highest standards of personal integrity, truthfulness, honesty, and fortitude in all actions in order to inspire confidence and trust in such actions
- Maintain the highest degree of integrity in dealing with potential, current, and past members including respecting and protecting privileged information accessed through the course of professional actions
- Strive for personal and professional excellence and encourage the professional development of others

Responsibility to professional development

- Advance skills through participation in continuing education
- Promote lymphedema awareness and the science of lymphology
- Collaborate with and support other professionals in carrying out LANA[®]'s mission

Respect and compassion for all

- Respect diversity through fair and objective advice and actions without influence on the basis of race, color, national origin, age, disability, sex, gender identity, religion, and where applicable, political beliefs, marital status, or sexual orientation
- Respect the structure and responsibilities of the LANA[®] Board of Directors, provide them with facts and advice as a basis for making policy decisions, and uphold and implement policies adopted by the LANA[®] Board of Directors
- Maintain national standards of care and service for the lymphedema community

Appendix 2

Privacy/Confidentiality Policy



LANA[®] has created and abides by a strict privacy/confidentiality policy demonstrating its firm commitment to CLT-LANA[®] candidate and certificant privacy. The policy applies to all aspects of the CLT-LANA[®] credential including the secure handling and storage of application materials, examinations, scores, and candidate and certificant records. LANA[®] and its agents shall keep confidential all candidates' and certified persons' information (including name, address, telephone numbers, examination scores, and other confidential records) unless authorized for release by the candidate or certified person.

It is the policy of LANA[®] that non-disclosed, protected information may NOT be released to or shared with:

- Any member of the public unless there is applicable statutory exception or written release from the CLT-LANA[®] candidate or certificant.
- Any LANA[®] member unless the recipient has a legitimate interest for the use of protected information to perform a service (i.e. committee work).

Furthermore, LANA[®] staff with access to protected information is expected to protect any information from unauthorized disclosure. This includes, as appropriate:

- Computer Systems and Applications Security: Central processing units, peripherals, portable storage devices, operating system, applications software and data.
- Physical Security: The premises occupied by LANA[®] or its contractors using computer equipment storing or having access to protected information.
- Operational Security: Environmental control, power equipment, operational activities related to operations.
- Procedural Security: Established and documented security processes for information technology staff, vendors, management, and individual users of protected information.
- Network Security: Communications equipment, transmission paths, switches, terminals and adjacent areas.

Appendix 3

CLT-LANA[®] DETAILED CONTENT OUTLINE
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The examination contains 120-questions and candidates will be allowed two hours to complete the examination. The following is a detailed outline of the content and sub-content areas covered on the examination, along with their respective weightings showing what percentage of the examination questions are covered by each main content area.

CLT-LANA[®] DETAILED CONTENT OUTLINE

I. ANATOMY AND PHYSIOLOGY 25%

A. Comprehension of anatomy

1. Circulatory system (i.e., venous and arterial)
2. Lymphatic system
 - a. Embryology
 - b. Lymphangiogenesis
 - c. Prelymphatic channels
 - d. Lymphatic vessels
 - e. Lymph nodes
 - f. Lympho-venous anastomoses
 - g. Watersheds and collateral anastomoses
 - h. Superficial drainage pathways
 - i. Head and neck
 - ii. Upper extremities
 - iii. Lower extremities
 - iv. Trunk
 - v. Genital
 - i. Deep drainage pathways (e.g., abdominal, pelvic, thoracic organs, limbs)
3. Integumentary system

4. Interstitium

B. Comprehension of physiology

1. Function of the circulatory system including the lymphatic system
2. Microcirculation
 - a. Starling's hypothesis and equilibrium (including updates)
 - b. Safety factors that prevent edema
3. Lymph formation and transport

II. LYMPH VASCULAR DISORDERS (i.e., primary and secondary lymphedema) 15%

- A. Differentiate etiology
- B. Identify pathology and pathophysiology
- C. Classify and stage lymph vascular disorders
- D. Recognize sign and symptoms

III. OTHER DISORDERS (e.g., lipedema, lipolymphedema, phlebolympedema, chronic venous insufficiency, myxedema) 10%

- A. Differentiate etiology
- B. Identify pathology and pathophysiology
- C. Recognize signs and symptoms

IV. PATIENT EVALUATION 20%**A. Identify relevant elements of patient history**

1. Edema and prior edema treatment
2. Family history
3. Other medical history
4. Medications/supplements/diet
5. Infections
6. Symptoms
7. Functional status (e.g., Activities of Daily Living (ADL))
8. Psycho-social

B. Assess implications of patient history**C. Recognize potential complications associated with lymphedema**

1. Medical conditions associated with lymphedema (e.g., angiosarcoma, cellulitis,

anasarca, lymphoceles, cancer recurrence)

2. Medical conditions that exclude treatment (e.g., acute congestive heart failure, untreated cellulitis, acute deep venous thrombosis)
3. Medical conditions that may limit treatment approach (e.g., compensated congestive heart failure, peripheral neuropathy, cognitive impairment)
4. Medical conditions that can affect lymphedema treatment outcomes (e.g., arthritis, hypertension, impaired mobility)

D. Conduct physical examination

1. Weight and height
2. Appearance of involved limb(s) and adjacent areas (e.g., deepened skin folds, lobules, discoloration)
3. Clinical signs (e.g., tissue texture, Stemmer's sign)
4. Peripheral pulses
5. Range of Motion (ROM), muscle strength, posture, and gait
6. Sensation
7. Measurements (e.g., circumferential, volumetric, perometry)
8. Skin integrity (e.g., lymphorrhea, fungal infection)

E. Comprehension of diagnostic tests (e.g., lymphoscintigraphy, computerized tomography (CT), magnetic resonance imaging (MRI), venous Doppler examination, and ankle brachial index (ABI))

1. Purpose
2. Testing procedures

F. Incorporate results of diagnostic tests in treatment planning

V. LYMPHEDEMA MANAGEMENT 30%

A. Apply principles of Complete Decongestive Therapy (CDT)

1. Manual lymphatic drainage (MLD)
 - a. Effects
 - b. Technique concepts (e.g., pressure, direction, sequence)
 - c. Contraindications

2. Compression bandaging

- a. Effects
- b. Concepts (e.g., materials, gradient pressure, procedure)
- c. Contraindications

3. Compression garments

- a. Effects
- b. Concepts (e.g., types and styles, fitting principles, grades of compression)
- c. Contraindications

4. Decongestive exercises

- a. Effects
- b. Concepts (e.g., variations, approaches)
- c. Contraindications

5. Skin care**6. Education**

- a. Activities of Daily Living (ADL) modifications
- b. Compression bandaging
- c. Compression garments (e.g., wear and care)
- d. Exercise
- e. Lymphatic drainage
- f. Nutrition
- g. Precautions and risk reduction
- h. Self-assessment
- i. Skin care
- j. Signs and symptoms of infection
- k. Weight management
- l. Follow-up

B. Recognize principles of adjunct treatments

- 1. Intermittent pneumatic compression (IPC)
- 2. Additional compression devices

3. Additional treatment options (e.g., laser, elastic taping, deep oscillation)

- C. Adapt treatment plan to specific populations and needs (e.g., pediatric, palliative care, wound care)**
- D. Recognize factors that affect quality of life (e.g., psycho-social, adherence issues)**
- E. Identify best practices (e.g., International Lymphoedema Framework (ILF), International Society of Lymphology (ISL), National Lymphedema Network (NLN), American Lymphedema Framework Project (ALFP))**

Appendix 4

Acronyms & Synonyms

Candidates should note they will be required to understand the following acronyms when they sit for the examination, as they will appear in test questions:

CDT = Complete Decongestive Therapy

CHF = Congestive Heart Failure

CRPS 1 = Complex Regional Pain Syndrome

DVT = Deep Vein Thrombosis

MLD = Manual Lymphatic Drainage

RSD = Reflex Sympathetic Dystrophy

Candidates should note they will be required to understand the following synonyms when they sit for the examination, as they will appear in test questions:

CRPS 1 = RSD

High Volume Insufficiency = Dynamic Insufficiency

Lymphocele = Seroma = Pseudocyst

Appendix 5

Starling's Principle of Fluid Exchange

In Response to Inquiries About Starling's Principle of Fluid Exchange.

LANA[®] is aware that for the past two decades there has been a rethinking of Starling's Principle. Because most references and textbooks continue to use the traditional understanding, for now Starling's related exam questions will focus only on the traditional Starling's forces and safety factors and their effect on fluid balance in the tissues. Exam candidates will not be required to distinguish between "traditional" Starling's and the more recent interpretation.

For individuals who are interested in understanding the newer interpretation of the Starling's Principle, the following readings are recommended. Be aware that the content of these readings is not currently the focus of exam questions.

1. Diseases of the Lymphatics. Browse, Burnand, and Mortimer eds, 2003 by CRC Press, Chapter 3
2. Levick JR: Revision of the Starling principle: new views of tissue fluid balance. *J Physiol* 557(3) (2004) p. 704. 2004.
3. Levick JR, Michel CC: Microvascular fluid exchange and the revised Starling principle. *Cardiovascular Research* 87(2):198-210. 2010
4. Mortimer PS, Rockson SG: New developments in clinical aspects of lymphatic disease. *J. of Clinical Investigation* 124(3):915-921. 2014.

Appendix 6

Sample Examination Items

The following sample examination questions are similar in style and format to those which appear on the examination:

1. Lipedema **PRIMARILY** affects
 - (A) women.
 - (B) men.
 - (C) children under six.
 - (D) elderly of both sexes.
2. The lymph collectors **MOST** resemble
 - (A) cork-screw.
 - (B) garden hose.
 - (C) silk-like thread.
 - (D) string of pearls.
3. Six months after completing a course of CDT, a patient with secondary lymphedema following axillary lymph node dissection presents with a 20 lb. weight loss and a rapid 30% increase in the girth of her affected limb. Which of the following is the **MOST** likely explanation?
 - (A) Congestive heart failure
 - (B) Cancer recurrence
 - (C) Renal failure
 - (D) Hypoproteinemia
4. Lymphostatic edema is
 - (A) highly alkaline.
 - (B) highly acidic.
 - (C) protein-rich.
 - (D) protein-poor.
5. Lymphedema caused by malformations (dysplasia) of the lymphatic system is known as
 - (A) primary lymphedema.
 - (B) lipolymphedema.
 - (C) secondary lymphedema.
 - (D) phlebolympedema.
6. When evaluating a lymphedema patient, it is important to measure the unaffected as well as the affected extremity because
 - (A) the patient needs to know these measurements to get insurance reimbursement.
 - (B) it will help to monitor weight gain and joint mobility measurements.
 - (C) measurements will show whether the treatment has benefited the patient.
 - (D) measurements will determine the number of bandages needed to reduce a limb.
7. The history of a person with lymphedema reveals recurrent episodes of cellulitis in the lymphedematous extremity. Upon examination, the involved extremity was warm and red. It is important to start CDT

- (A) as soon as possible.
 - (B) only after antibiotics have been initiated.
 - (C) after a vigorous exercise program has been initiated.
 - (D) only after vigorous sequential pumping has been initiated.
8. Lymphedema resulting from breast cancer surgery is classified as
- (A) dynamic lymphedema.
 - (B) primary lymphedema.
 - (C) secondary lymphedema.
 - (D) idiopathic lymphedema.

Answers

- 1. A
- 2. D
- 3. B
- 4. C

- 5. A
- 6. C
- 7. B
- 8. C

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Appendix 7

Reading List

PLEASE NOTE THIS IS NOT A REQUIRED READING LIST.

LANA[®] highly recommends reviewing class notes and bibliographies.

1. Browse, N., Burnand, K., & Mortimer, P.: Diseases of the Lymphatics. Arnold, Great Britain. 2003. ISBN: 0 340 76203 9
2. Casley-Smith, J.R., Casley-Smith, J.R.: Modern Treatment for Lymphoedema. Lymphoedema Association of Australia, 1997. ISBN 0-646-316648
3. Földi, M., Földi, E., Strobenreuther, R., Kubik, S.: Foldi's Textbook of Lymphology for Physicians and Lymphedema Therapists. 2nd edition Urban & Fischer, 2006. ISBN 13:978-07234-3446-7 ISBN 10: 0-7234-3446-8
4. Guyton, A.C., Hall, J.E.: Textbook of Medical Physiology. 12th edition Chapters 16 and 25. Philadelphia, PA, W.B.Saunders Elsevier, 2011. ISBN 978-1-4160-4574-8
5. Kasseroller, R.: Compendium of Dr. Vodder's Manual Lymph Drainage. Haug Verlage, 1998. ISBN 3-7760-1729-5
6. Kelly, D.: A Primer on Lymphedema. Prentice Hall, 2001. ISBN 00-13-022410-3
7. Weissleder, H., Schuchhardt, C.: Lymphedema - Diagnosis and Therapy. Kagerer Kommunikation, 1997, and Viavital Publishers, 2001, 2008. ISBN 3-934371-38-8 ISBN 13 978-3-934371-38-5
8. Wittlinger, H., Wittlinger, D., Wittlinger, A., Wittlinger, M.: Dr. Vodder's Manual Lymph Drainage. A Practical Guide. Georg Thieme Verlag, 2011. ISBN 978-3-13-143191-2
9. Zuther, J.: Lymphedema Management: The Comprehensive Guide for Practitioners. 2nd edition. Thieme Medical, 2009. ISBN: 978-3-13-139482-8