

CARDIOVASCULAR (ARTERIES AND VEINS)
INSTRUCTOR LESSON PLAN
TIME REQUIRED: 2 HOURS

Table of Contents

| | |
|--|----|
| Lesson Description | 2 |
| Introduction to Cardiovascular (Arteries and Veins)..... | 4 |
| Topic 1: Hypertension DC 7101 | 6 |
| Topic 2: Varicose Veins DC 7120..... | 9 |
| Topic 3: Peripheral Vascular Disease DC 7114 | 11 |
| Topic 4: Cold Injuries 38 CFR 4.104; DC 7122..... | 14 |
| Topic 5: Aneurysms 38 CFR 4.104; DC 7111, 7112 | 17 |
| Practical Exercise..... | 20 |
| Lesson Review, Assessment, and Wrap-up | 21 |

LESSON DESCRIPTION

The information below provides the instructor with an overview of the lesson and the materials that are required to effectively present this instruction.

TMS # 4194538

PREREQUISITES None

TARGET AUDIENCE RVSR, Entry Level.

Although this lesson is intended for RVSR Entry Level employees, it may be taught to other VA personnel as mandatory or refresher type training.

TIME REQUIRED 2 hours

**MATERIALS/
TRAINING AIDS**

Lesson materials:

- Cardiovascular (arteries and veins) PowerPoint presentation
- Cardiovascular (arteries and veins) lesson plan
- Cardiovascular (arteries and veins) e-case
- Cardiovascular (arteries and veins) scavenger hunt
- Cardiovascular (arteries and veins) scavenger hunt answer key

**TRAINING
AREA/TOOLS**

The following are required to ensure the trainees are able to meet the lesson objectives:

- Classroom or private area suitable for participatory discussions
- Seating, writing materials, and writing surfaces for trainee note taking and participation
- Handouts, which include a practical exercise
- Large writing surface (easel pad, chalkboard, dry erase board, overhead projector, etc.) with appropriate writing materials
- Computer with PowerPoint software to present the lesson material

Trainees require access to the following tools:

- 38 CFR Part 3
- 38 CFR Part 4
- Compensation and Pension Knowledge Management portal
- Rating Job Aids website

PRE-PLANNING

- Become familiar with all training materials by reading the Instructor Lesson Plan while simultaneously reviewing the corresponding PowerPoint slides. This will provide you the opportunity to see the connection between the Lesson Plan and the slides, which will allow for a more structured presentation during the training session.
- Become familiar with the content of the trainee handouts and their association to the Lesson Plan.
- Practice is the best guarantee of providing a quality presentation. At a minimum, do a complete walkthrough of the presentation to practice coordination between this Lesson Plan, the trainee handouts, and the PowerPoint slides and ensure your timing is on track with the length of the lesson.
- Ensure that there are copies of all handouts before the training session.
- When required, reserve the training room.
- Arrange for equipment such as flip charts, an overhead projector, and any other equipment (as needed).
- Talk to people in your office who are most familiar with this topic to collect experiences that you can include as examples in the lesson.
- This lesson plan belongs to you. Feel free to highlight headings, key phrases, or other information to help the instruction flow smoothly. Feel free to add any notes or information that you need in the margins.

TRAINING DAY

- Arrive as early as possible to ensure access to the facility and computers.
- Become familiar with the location of restrooms and other facilities that the trainees will require.
- Test the computer and projector to ensure they are working properly.
- Before class begins, open the PowerPoint presentation to the first slide. This will help to ensure the presentation is functioning properly.
- Make sure that a whiteboard or flip chart and the associated markers are available.
- The instructor completes a roll call attendance sheet or provides a sign-in sheet to the students. The attendance records are forwarded to the Regional Office Training Managers.

INTRODUCTION TO CARDIOVASCULAR (ARTERIES AND VEINS)

INSTRUCTOR INTRODUCTION

Complete the following:

- Introduce yourself
- Orient learners to the facilities
- Ensure that all learners have the required handouts

TIME REQUIRED

0.25 hours

PURPOSE OF LESSON

Explain the following:

This lesson is intended to assist the RVSR trainee with understanding the importance of how to evaluate disabilities for Compensation under 38 CFR 4.104. This lesson will contain discussions and exercises that will allow you to gain a better understanding of:

- hypertension
- varicose veins
- peripheral vascular disease (PVD)
- special considerations for presumption of service connection under 3.309(a) specifically related to PVD, aneurysms or Buerger's disease
- aneurysms
- cold injuries
- special consideration for special monthly compensation

LESSON OBJECTIVES

Discuss the following:

Slide 2

Handout 2

In order to accomplish the purpose of this lesson, the RVSR will be required to accomplish the following lesson objectives.

The RVSR will be able to:

- identify disabilities commonly evaluated under 38 CFR 4.104 for arteries and veins;
- correctly identify special considerations for conditions under 38 CFR 4.104; and
- evaluate an e-case of the arteries and veins, with focus on hypertension, varicose veins, peripheral vascular disease and/or cold injuries.

Explain the following:

Each learning objective is covered in the associated topic. At the conclusion of the lesson, the learning objectives will be reviewed.

STAR ERROR CODE(S)

A1, C1, D1, H1

REFERENCES

Explain where these references are located in the workplace.

Slide 3

Handout 3

All M21-1 references are found in the Live Manual Website.

- 38 CFR §3.50 Special Monthly Compensation
- 38 CFR §3.309 (c) Presumptive Service Connection for Former Prisoners of War
- 38 CFR §4.104 Schedule of Ratings—Cardiovascular System
- M21-1, Part III, Subpart iv, Chapter 4, Section G Cardiovascular System Conditions (to include Cold Injuries)
- M21-1, Part III, Subpart iv, Chapter 6, Section B.5 Other Issues to Consider When Evaluating Evidence

TOPIC 1: HYPERTENSION

INTRODUCTION

This topic will allow the RVSR trainees to better understand the rating schedule for the cardiovascular system and how to evaluate hypertension for service-connection.

TIME REQUIRED

0.25 hours

OBJECTIVES/ TEACHING POINTS

Topic objectives:

- Explain hypertension DC 7101
- Explain important elements of the Hypertension Disability Benefits Questionnaire (DBQ)
- Explain the notes within the Evaluation Builder/VBMS-R

The following topic teaching points support the topic objectives:

- Explain the hypertension discussion question

Hypertension DC 7101

Slide 4

EXPLAIN the graphic of normal and hypertensive heart.

Basically, hypertension is a condition in which the patient has higher than normal blood pressure.

Hypertension for the VA means elevated diastolic blood pressure, predominantly 90mm or greater.

Isolated systolic hypertension means that systolic blood pressure is predominantly 160mm or greater with a diastolic blood pressure of less than 90mm.

Note: Use of the term “hypertension” in reports or in VA guidance will most often be used as a synonym for any type of hypertensive vascular disease.

Hypertension DC 7101

Slide 5

REVIEW the rating criteria for DC 7101

EXPLAIN that notes 1,2,3 are very important to our discussion of hypertension, as Note 1 provides a detailed definition of diastolic and isolated systolic hypertension; Note 2 explains how to evaluate hypertension due to aortic insufficiency or hyperthyroidism; and Note 3 tells us that we should evaluate hypertension separately from hypertensive heart disease and other types of heart disease.

Special considerations:

May be subject to a presumption of service connection (38 CFR

3.309(a)) if manifest to a compensable degree within one year of discharge.

Also refer to 38 CFR 3.309(c), as it also a presumptive condition of being a Former Prisoner of war (FPOW).

Hypertension DBQ

Slide 6

Review the DBQ, with attention being paid to the note under the diagnosis section, and questions 2B and 2C.

Discuss that in addition to the definitional requirements for a diagnosis of hypertension or isolated systolic hypertension 38 CFR 4.104, DC 7101 provides a second criterion that must be met for a diagnosis to be acceptable.

Subject to the exceptions below, a diagnosis of hypertension (or isolated systolic hypertension) must be ***confirmed by blood pressure readings taken two or more times on at least three different days.***

Exceptions:

- In a claim for reevaluation of SC hypertension, readings on multiple days are not required. The policy, reflected in the Hypertension DBQ, is that where hypertension has been previously diagnosed, the examiner is only required to take three blood pressure readings on the day of examination.
- Similarly, multiple confirmatory readings are not required when there is a past diagnosis with hypertensive vascular disease currently controlled on medication as provided in M21-1, Part III, Subpart iv, 4.E.1.b.
- Note 1 in 38 CFR 4.104, DC 7101 *does not require* that a diagnosis of either type of hypertensive vascular disease *in service treatment records* (STRs) have been confirmed by readings taken two or more times on each of three different days for the purposes of in-service incurrence.

Important: The decision maker must critically evaluate the evidence to ensure the in-service diagnosis was based on blood pressure readings in accordance with 38 CFR 4.104, DC 7101 and M21-1, Part III, Subpart iv, 4.E.1.b in claims for SC for hypertension where

- hypertension is currently diagnosed, and
- controlled with medication.

If the evidence is unclear, medical clarification and/or a medical opinion

may be warranted.

Evaluation Builder

REVIEW Evaluation Builder, specifically notes.

Slide 7

Please emphasize that Notes 1, 2, and 3 from the rating schedule are contained in the Evaluation Builder.

Explain that they will have a demonstration of the Evaluation Builder at the end of the class, and that the image was just for the presentation.

DISCUSSION

Veteran served in the US Army from May 6, 1962 through May 31, 1965. Claim for hypertension is received January 10, 2013. Section 5103 has been properly issued and has expired. STRs reflect no evidence of complaint, treatment, or diagnosis of hypertension during military service. Post-service treatment records reflect a substantiated diagnosis of hypertension in February 1966. Three day blood pressure readings reflected the following: day #1: 145/94, 140/92, 140/90; day#2: 140/95, 145/100, 140/97; and day#3: 160/90, 145/95, 145/95. Veteran has been prescribed hypertension medication since that time.

ANSWER

Deny service connection. Even though the hypertension diagnosis was substantiated within one year of discharge, the disability was not at a compensable level within the one-year presumptive period.

TOPIC 2: VARICOSE VEINS DC 7120

INTRODUCTION

This topic will allow the RVSR trainee to better understand the rating schedule and how to evaluate varicose veins for service connection.

TIME REQUIRED

0.25 hours

OBJECTIVES/ TEACHING POINTS

Topic objectives:

- Identify how to evaluate varicose veins
- Identify specific etiology, findings, and signs and important symptoms that apply if indicated on the DBQ
- Explain the Evaluation Builder functions within the VBMS/R tool

The following topic teaching points support the topic objectives:

- Evaluate each extremity separately and combine (§4.25)
- Remind the students of the bilateral factor (§4.26)

Varicose Veins (38 CFR 4.104, DC 7120)

Slide 10

EXPLAIN graphic description of varicose veins as shown on slide

Varicose veins are gnarled, enlarged veins. Any vein may become varicose, but the veins most commonly affected are those in the legs and feet. That's because standing and walking upright increases the pressure in the veins of your lower body.

Varicose veins may also signal a higher risk of other circulatory problems. Treatment may involve self-care measures or procedures by a doctor to close or remove veins.

Varicose Veins (38 CFR 4.104, DC 7120)

Slide 11

Review the rating criteria for DC 7120 and discuss the different requirements for each possible evaluation.

Emphasize the Note: *These evaluations are for involvement of a single extremity. If more than one extremity is involved, evaluate each extremity separately and combine (under §4.25), using the bilateral factor (§4.26), if applicable.*

Disability Benefits Questionnaire – Varicose Veins

Slide 12

Review the Arteries and Vein Conditions DBQ

Relate the varicose veins section of the DBQ to the evaluation criteria in the rating schedule.

Evaluation Builder

REVIEW screen shot of evaluation builder for varicose veins.

Slide 13

Explain how the DBQ and the rating criteria relate to the symptoms listed in the Evaluation Builder for a diagnosis of varicose veins.

Explain to students that selecting rating criteria is dependent on the DBQ, a confirmed diagnosis, and signs and symptoms from either outpatient records, service records, and any other factors for weighing evidence. Make sure you input all criteria that fare ound.

TOPIC 3: PERIPHERAL VASCULAR DISEASE DC 7114

INTRODUCTION This topic will allow the RVSR trainees to better understand the rating schedule and how to evaluate peripheral vascular disease (PVD) for service connection.

TIME REQUIRED 0.25 hours

**OBJECTIVES/
TEACHING POINTS** Topic objectives:

- Review the rating criteria for DC 7114
- Review DBQ and identify diagnosis, and signs and symptoms sections
- Review screen shot of evaluation builder for arteriosclerosis obliterans, and identify specifically notes as shown on slide

Peripheral Vascular Disease (PVD) (38 CFR 4.104, DC 7114)

Slide 14

EXPLAIN graphic description of peripheral vascular disease as shown on slide

A term indicating diseases of the arteries and veins of the extremities, especially conditions that interfere with adequate blood flow to or from the extremities. Also known as peripheral artery disease (PAD).

Explain that PAD is a disease in which plaque builds up in the arteries that carry blood to your head, organs, and limbs. Plaque is made up of fat, cholesterol, calcium, fibrous tissue, and other substances in the blood.

When plaque builds up in the body's arteries, the condition is called atherosclerosis. Over time, plaque can harden and narrow the arteries. This limits the flow of oxygen-rich blood to your organs and other parts of your body.

PAD usually affects the arteries in the legs, but it also can affect the arteries that carry blood from your heart to your head, arms, kidneys, and stomach. This article focuses on PAD affecting blood flow to the legs. (National Heart, Lung, and Blood Institute, <https://www.nhlbi.nih.gov/health/health-topics/topics/pad>)

Peripheral Vascular Disease (38 CFR 4.104, DC 7114)

Slide 15

Review the rating criteria for DC 7114, and discuss the requirements for each evaluation level.

EXPLAIN notes and special considerations associated with this diagnostic code.

Discuss Note 1 – definition of ankle/brachial index (ABI) and how it is determined.

Note 1: The ankle/brachial index is the ratio of the systolic blood pressure at the ankle (determined by Doppler study) divided by the simultaneous brachial artery systolic blood pressure. The normal index is 1.0 or greater.

Discuss Note 2, and explain that the types of bypasses and grafts will be evaluated under this DC.

Note 2: Evaluate residuals of aortic and large arterial bypass surgery or arterial graft as arteriosclerosis obliterans.

Discuss that with PVD, like most other disabilities of the extremities, we separately evaluate the extremities.

Note 3: These evaluations are for involvement of a single extremity. If more than one extremity is affected, evaluate each extremity separately and combine under §4.25, using the bilateral factor (§4.26), if applicable.

Special considerations:

May be subject to a presumption of service connection (38 CFR 3.309(a)) if manifested to a compensable degree within one year of discharge.

**Disability Benefits
Questionnaire - PVD**

Slide 16

Review Section IV of the DBQ, and emphasize the questions below. Explain how these questions fit into the rating schedule and how they tie into the Evaluation Builder.

4A. Has the Veteran ever been diagnosed with peripheral vascular disease, aneurysm of any large artery (other than aorta), arteriosclerosis obliterans or thrombo-angiitis obliterans (Buerger’s disease)?

4D. Indicate severity of current signs and symptoms and indicate extremity affected.

Evaluation Builder

Review screen shot of evaluation builder for arteriosclerosis obliterans, specifically notes as shown on slide.

Slide 17

Discuss how the information from the DBQ relates to the input areas in the Evaluation Builder.

Mention that the notes from the rating schedule are located at the bottom of the screen.

DISCUSSION

Ask trainees to review and answer scenario shown.

How would you evaluate a veteran that has claudication on walking on more than 100 yards with an ankle/brachial index of 0.5 on each leg?

- 20%
- 40%
- 60%

ANSWER

DC 7114, 20% evaluation, based on

- Claudication on walking more than 100 yards
- Ankle/brachial index of 0.9 or less.

Mention: Extra kudos if you calculated the combined of 40% with a bilateral factor of 3.6!

DEMONSTRATION

none

TOPIC 4: COLD INJURIES (38 CFR 4.104, DC 7122)

INTRODUCTION This topic will allow the RVSR trainees to better understand the rating schedule and how to evaluate cold injuries for service connection.

TIME REQUIRED 0.25 hours

**OBJECTIVES/
TEACHING POINTS** Topic objectives:

- Explain structural and functional causes of cold injuries
- Explain rating criteria for DC 7122

The following topic teaching points support the topic objectives:

- Explain notes and special considerations

Cold Injuries DC 7122 **EXPLAIN** graphic description of cold injuries as shown on slide, and provide a historical context for cold injuries (e.g. Ardennes Campaign (Battle of the Bulge); Chosin Reservoir during Korean War, etc.)

Slide 20

Injury by cold causes structural and functional disturbances of small blood vessels, cells, nerves, skin, and bone. Exposure to damp cold causes frostnip and immersion (trench) foot. Exposure to dry cold causes frostbite.

Discuss the symptoms of trench foot and frostbite with the trainees.

Trench foot:

- Symptoms of trench foot may include:
 - tingling and/or itching sensation,
 - pain,
 - swelling,
 - cold and blotchy skin,
 - numbness, and
 - a prickly or heavy feeling in the foot.

The foot may be red, dry, and painful after it becomes warm. Blisters may form, followed by skin and tissue dying and falling off. In severe cases, untreated trench foot can involve the toes, heel, or entire foot.

Frostbite:

- Symptoms of frostbite may include:
 - pins and needles feeling, followed by numbness;
 - hard, pale, and cold skin;
 - aching, throbbing or lack of feeling in the affected area;

or

- red and extremely painful skin and muscle as the area thaws.
- Very severe frostbite may cause:
 - blisters,
 - gangrene (blackened, dead tissue), and damage to tendons, muscles, nerves, and bone.
- Frostbite may affect any part of the body. The hands, feet, nose, and ears are the places most prone to the problem.
 - If the frostbite did not affect your blood vessels, a complete recovery is possible.
 - If the frostbite affected the blood vessels, the damage is permanent. Gangrene may occur. This may require removal of the affected body part (amputation).

Cold injuries DC 7122 Review the rating criteria for each evaluation level in DC 7122.

Slide 21

Explain the notes and special considerations associated with cold injuries.

Discuss the need to properly evaluate different complications of cold injuries with the appropriate DC and evaluation.

Note 1: Separately evaluate amputations of fingers or toes, and complications such as squamous cell carcinoma at the site of a cold injury scar or peripheral neuropathy, under other diagnostic codes. Separately evaluate other disabilities that have been diagnosed as the residual effects of cold injury, such as Raynaud's phenomenon, muscle atrophy, etc., unless they are used to support an evaluation under DC 7122.

Note 2: Evaluate each affected part (e.g., hand, foot, ear, nose) separately and combine the ratings in accordance with §4.25 and §4.26.

Special considerations: May be subject to a presumption of service connection for Former Prisoners of War (38 CFR 3.309(c)).

If there is amputation or loss of use of an extremity, consider entitlement to special monthly compensation under 38 CFR 3.350.

**Disability Benefits
Questionnaire –
Cold Injuries**

Discuss the Cold Injuries DBQ, with emphasis on questions 4, 5, and 8.

Explain the note prior to question number 5, and emphasize that additional DBQs may be required if there are complications,

Slide 22 amputations or scars related to the cold injuries.

Evaluation Builder Review the screen shot of Evaluation Builder for cold injury residuals.

Slide 23 Tie the DBQ results and rating criteria into the input selections contained in the Evaluation Builder.

Mention to the trainees that Notes 1 and 2 from the rating schedule are on the Evaluation Builder.

EXERCISE none

NOTE(S) none

DEMONSTRATION none

TOPIC 5: ANEURYSMS 38 CFR 4.104; DC 7111, 7112

INTRODUCTION This topic will allow the RVSR trainees to better understand the rating schedule and how to evaluate Aneurysms for service-connection.

TIME REQUIRED 0.25 hours

**OBJECTIVES/
TEACHING POINTS** Topic objectives:

- Explain rating criteria for 38 CFR 4.104; DC 7111, 7112
- Identify notes associated with these diagnostic codes
- Explain the section of DBQ concerning aortic aneurysms
- Explain the section of DBQ concerning aneurysms of a small artery

The following topic teaching points support the topic objectives:

- Review screen shot of evaluation builder for large artery aneurysms, specifically notes as shown on slide
- Review screen shot of evaluation builder for small artery aneurysms
- Discuss scenario questions on aneurysm

Aneurysms (DC 7111, 7112)

Slide 24

EXPLAIN graphic description of aneurysms as shown on slide

Bulging or sac of a blood vessel formed by the dilation of the wall of an artery, a vein, or the heart.

An aneurysm is a bulge or "ballooning" in the wall of an artery. Arteries are blood vessels that carry oxygen-rich blood from the heart to other parts of the body. If an aneurysm grows large, it can burst and cause dangerous bleeding or even death.

Most aneurysms occur in the aorta, the main artery that runs from the heart through the chest and abdomen. Aneurysms also can happen in arteries in the brain, heart and other parts of the body. If an aneurysm in the brain bursts, it causes a stroke.

Aneurysms can develop and become large before causing any symptoms. Often doctors can stop aneurysms from bursting if they find and treat them early. They use imaging tests to find aneurysms. Often aneurysms are found by chance during tests done for other reasons. Medicines and surgery are the two main treatments for aneurysms.

[NIH Medline Plus](#)

**Aneurysm, Large Artery
(38 CFR 4.104, DC 7111)**

Review and discuss the rating criteria for DC 7111

Discuss the notes associated with this diagnostic code. Please emphasize the need to evaluate extremities separately and the need to follow the instructions outlined in these notes, to include Note 3.

Slide 25

Note 1: The ankle/brachial index is the ratio of the systolic blood pressure at the ankle (determined by Doppler study) divided by the simultaneous brachial artery systolic blood pressure. The normal index is 1.0 or greater.

Note 2: These evaluations are for involvement of a single extremity. If more than one extremity is affected, evaluate each extremity separately and combine (under §4.25), using the bilateral factor, if applicable.

Note 3: A rating of 100 percent shall be assigned as of the date of hospital admission for surgical correction. Six months following discharge, the appropriate disability rating shall be determined by mandatory VA examination. Any change in evaluation based upon that or any subsequent examination shall be subject to the provisions of §3.105(e) of this chapter.

**Aneurysm, Any Small Artery
(38 CFR 4.104, DC 7112)**

Review and discuss the rating criteria for DC 7112

Explain the note associated with this diagnostic code.

Note: If symptomatic, evaluate according to body system affected. Following surgery, evaluate residuals under the body system affected.

Slide 26

Disability Benefits Questionnaire – Artery and Vein

Discuss Sections V (Slide 27) and VI (Slide 28) of the Arteries and Veins DBQ

Discuss how the answers provided in Section V and VI correspond with the rating criteria for a large aneurysm.

Slide 27-28

Explain that when looking at the Evaluation Builder in the next slide they will see how all of the information fits when evaluating aneurysms.

Evaluation Builder

Slide 29-30

Review screen shot of Evaluation Builder for large artery aneurysms, specifically notes as shown on slide.

Notes 1, 2 and 3 from the rating schedule are highlighted in red on the Evaluation Builder.

Review screen shot of Evaluation Builder for small artery aneurysms.

If symptomatic, evaluate according to body system affected. Following surgery, evaluate residuals under the body system affected.

DISCUSSION

Slide 31

ASK trainees to review and answer scenario shown.

While on active duty a Veteran was diagnosed with a uterine aneurysm. The treatment resulted in a hysterectomy.

- ❖ If a benefit is granted, what is the DC?
- ❖ Any other benefits warranted?

ANSWER

Per note associated with DC 7112 “Following surgery, evaluate residuals under the body system affected.”

Slide 32

Therefore DC 7112-7618

Veteran also entitled to SMC K per 38 CFR §3.350.

QUESTIONS

none

Slide 33

PRACTICAL EXERCISE

TIME REQUIRED 0.25 hours

EXERCISE The RVSR trainee will complete a scavenger hunt, then an e-case to the school house. The instructor will go over the scavenger hunt once all students have completed the activity.

Feedback from the instructor for the e-case will be provided to the school house as part of the review process. Further questions can be individually emailed to the instructor.

Ask if there are any questions about the information presented in the exercise, and then proceed to the Review.

LESSON REVIEW, ASSESSMENT, AND WRAP-UP

| | |
|-------------------------------|---|
| INTRODUCTION | The Cardiovascular (Arteries and Veins) lesson is complete. |
| <i>Discuss the following:</i> | Review each lesson objective and ask the trainees for any questions or comments. |
| TIME REQUIRED | 0.25 hours |
| LESSON OBJECTIVES | <p>You have completed the Cardiovascular (Arteries and Veins) lesson.</p> <p>The trainee should be able to:</p> <ul style="list-style-type: none">• Identify disabilities commonly evaluated under 38 CFR 4.104 for arteries and veins• Correctly identify special consideration for conditions under 38 CFR 4.104• Complete scavenger hunt activity as part of a competency check.• Evaluate an e-case of the arteries and veins, with focus on hypertension, varicose veins, peripheral vascular disease and disabilities resulted from cold injuries. |