Diagnosis

Chapter 1

Diagnosis

Learning Objectives

Upon completion of this chapter, you will be able to:

- master some basic knowledge about diagnosis;

- understand common feelings of the patients when waiting for a diagnosis;

- grasp the precise application of diagnostic terminology;

- improve comprehensive linguistic application abilities of diagnosis.

Part 1 Pre-reading Tasks

Task 1 Compare and Contrast

Directions: In medical English, medical terminology is the language used by health care professionals to describe medical concepts, conditions, procedures, and treatments in medical contexts. It refers to the same meaning but is different from the word used in general contexts. Consult your dictionaries, and write down the equivalent words with the same meaning used as General Expressions (GE) and Medical Expressions (ME) respectively in the table below. No. 1 is exemplified for you to follow.

No.	Word Meaning	GE	ME (Noun/Adjective)
1	心脏	heart	cardiac
2	牙，齿		
3	大脑		
4	嘴		
5	舌		
6	耳朵		
7	肚子		

(Continued)

No.	Word Meaning	GE	ME (Noun/Adjective)
8	鼻子		
9	皮肤		
10	眼睛		

Task 2 **Read and Think**

Directions: *Read the following 10 pairs of sentences, fill in the blanks with the proper words in Task 1, which are used differently in contexts as GE and ME, change the form where necessary, and keep an eye on them.*

1. She felt a sudden pain in her _____ and collapsed on the floor. (GE)
   He was diagnosed with a(n) _____ arrhythmia and had to take medication. (ME)

2. I've just had a(n) _____ out at the dentist's. (GE)
   A(n) _____ implant is an artificial tooth root that is inserted into the jawbone to support a replacement tooth or bridge. (ME)

3. She had a brilliant _____ and could solve any problem. (GE)
   He suffered a(n) _____ hemorrhage and lost consciousness. (ME)

4. I clapped a hand over her _____. (GE)
   _____ medicine is a branch of dentistry that deals with the diagnosis and management of diseases and disorders of the oral and maxillofacial region. (ME)

5. He bit his _____ by accident and it started to bleed. (GE)
   The purpose is to explore an effective treatment for hypertrophy of _____ tonsil. (ME)

6. She was murmuring in his _____. (GE)
   Unfolding approach of earflap is ideal for modern _____ surgery. (ME)

7. Mom, my _____ hurts. (GE)
   One study found that muscle loss and the accumulation of body fat around the _____ are associated with a decline in fluid intelligence. (ME)

8. She punched him on the _____. (GE)
   _____ bones expanded posteriorly. (ME)

9. Her _____ was as smooth as silk. (GE)

The drug diffuses through the epidermis to the blood vessels in the _____ layer beneath. (ME)

10. He closed his _____ and fell asleep. (GE)

The synoptophore allows for precise measurement of _____ deviations (眼位 偏斜). (ME)

Task 3 Lead-in Questions

Directions: Read the questions below and answer them in detail.

1. How do you understand the diagnostic process?

2. What kind of feelings do you usually get while waiting for a diagnosis? And how do you deal with them?

Part 2 Reading and Analysis

Text A

What Is a Diagnosis?

1 Diagnosis in **health care** is among the most important processes since the **protocol** for patient **treatment** depends on this step. Even more, health research and policy draw on this area for their validity. For instance, payment policy, allocation of financial and other resources, and research focus are determined largely by diagnoses.

2 Diagnosis depends on a **framework** of **clinical** reasoning, or what is termed clinical decision-making. It has been described as a "pre-existing set of categories agreed upon by the medical profession to designate a specific condition".

The diagnostic process

3 Diagnosis is the endpoint of a complex process centered on a patient, collaborating with both the patient and other sources of clinical information to reason backward as to the potential health issue causing the patient's current condition.

4   Typically prompted by **symptoms**, the patient first engages with the health care system. This leads to one or more rounds of gathering, integrating, and interpreting information, ultimately arriving at a working diagnosis. Information may enter this loop at various times, altering the earlier hypothesis as other probabilities arise or are strengthened.

5   Communication is key during this process, both between the patient, family members, and health care **professionals**. Sources of information include the clinical history, physical examination, diagnostic testing, and consultation with other clinicians. Arriving at a diagnosis involves **ruling out differential** diagnoses. Once a working diagnosis is arrived at, the patient should be informed, including how reliable to diagnosis is.

6   All further changes in the diagnosis must also be **shared with** the patient, especially as the diagnosis is modified and refined with further incorporation of data. Finally, when one or at most two possibilities are left, the working diagnosis is verified. This refers to comparing the diagnosis with the various signs and symptoms, evaluating how well it fits the patient's risk factors and state of health, and the need for additional diagnoses to explain the clinical features.

7   The importance of diagnostic verification lies in proceeding with only those tests that are justified by the expected information obtained and its positive impact on patient outcomes. Sometimes, risky or **invasive** tests are required for diagnosis when the information available is inadequate to explain the health issue or belies the working diagnosis.

8   Patient treatment precedes the arrival at a final diagnosis, as it should, but further care can be optimized by continuing to make sure that the **uncertainty** surrounding the working diagnosis is being progressively reduced with each step. The outcome of the initial or **provisional** treatment itself provides important information that can refine the working diagnosis.

Bedside evaluation

9   History taking is a skill that is fundamental to diagnosis and building a relationship with the patient. It is linked to interviewing the patient, where the clinician obtains the patient's medical history, or previously acquired details of history are verified to be accurate.

10   Various types of clinical history include the current or presenting symptom, the past medical history, family history, social history, drug and **medication** history,

and supplement history. A good history is based on communication, which requires **rapport**, good manners, and time. This is followed by a physical examination, which can help determine the next diagnostic step, including diagnostic testing, and build further trust.

Physical examination

11 The physical examination continues the diagnostic process, adding information obtained by inspection, **palpation**, **percussion**, and **auscultation**. When data accumulated from the history and physical examination are complete, a working diagnosis is established, and tests are selected that will help **retain** or exclude that diagnosis.

Diagnostic testing

12 Testing became key to diagnosis only about a century ago. Testing may occur through multiple rounds and sometimes **pick up** potentially dangerous conditions before they become apparent. Diagnostic testing uses laboratory tests, **pathology**, and imaging, in addition to mental health screening tests, sleep **apnea** tests, and tests for vision, hearing, cognition, and **neurological** status.

Clinical decision-making

13 Clinical reasoning involves putting the information together to assess and manage the patient's medical issues. Both analytical and non-analytical methods of decision-making are involved, the one being rapid, unconscious, and intuitive but the other slow, deliberate, and reflective.

14 Many biases can affect the accuracy of such thinking. These include dependence on mental shortcuts, or **heuristics**, which can fail, called a cognitive bias. This is the tendency to think in a way that causes poor judgment. It can also be caused by variations in effect, tiredness, distraction, and physician motivation. Overconfidence, attributing physical symptoms to known mental illness, and relying on typical symptoms, can cause misdiagnosis.

15 With experience and typical symptoms and signs, analytical thinking takes a **backseat** to automatic processing. For instance, experienced doctors use pattern recognition to **diagnose** illnesses because they rapidly generate multiple mental models of diseases and match them to their observations. Feedback mechanisms are key to improving diagnostic accuracy, as a result. The use of information technology properly can lead to better clinical reasoning but can also reduce its quality.

(809 words)

Notes

1. (Para. 2) It has been described as a "pre-existing set of categories agreed upon by the medical profession to designate a specific condition". 诊断被描述为 "医学界事先约定的一组类别，用来指定一种特定的病症"。

2. (Para. 4) Information may enter this loop at various times, altering the earlier hypothesis as other probabilities arise or are strengthened. 信息可能在不同的时间进入这个循环，随着其他概率的出现或加强而改变早期的假设。
    loop: a set of instructions that is repeated again and again until a particular condition is satisfied 循环

3. (Para. 15) For instance, experienced doctors use pattern recognition to diagnose illnesses because they rapidly generate multiple mental models of diseases and match them to their observations. 例如，有经验的医生使用模式识别来诊断疾病，因为他们可以快速生成多种疾病的心理模型，并将其与观察结果进行匹配。
    pattern recognition: 通过计算机用数学技术方法来研究模式的自动处理和判读

Word List

1. **diagnosis** [ˌdaɪəɡˈnoʊsɪs] *n.*
    the act of discovering or identifying the exact cause of an illness or a problem 诊断；（问题原因的）判断

2. **protocol** [ˈprəʊtəkɒl] *n.*
    a plan for performing a scientific experiment or medical treatment 科学实验计划；医疗方案

3. **treatment** [ˈtriːtmənt] *n.*
    sth. that is done to cure an illness or injury, or to make sb. look and feel good 治疗；疗法；诊治

4. **framework** [ˈfreɪmwɜːrk] *n.*
    the structure of a particular system（体系的）结构；机制

5. **clinical** [ˈklɪnɪkl] *adj.*
    relating to the examination and treatment of patients and their illnesses 临床的，临床诊断的

6. **diagnostic** [ˌdaɪəɡˈnɒstɪk] *adj.*
    connected with identifying sth., especially an illness 诊断的，判断的

7. **symptom** [ˈsɪmptəm] *n.*
    a change in your body or mind that shows that you are not healthy 症状

8. **professional** [prə'feʃnəl] *n.*

    a person who does a job that needs special training and a high level of education 专门人员，专业人士；专家

9. **differential** [ˌdɪfə'renʃl] *adj.*

    showing or depending on a difference; not equal 差别的；以差别而定的；有区别的

10. **invasive** [ɪn'veɪsɪv] *adj.*

    involving cutting into the body 切入的；开刀的

11. **uncertainty** [ʌn'sɜrtənti] *n.*

    an event or a situation that is not known or beyond one's knowledge, creating doubt or ambiguity 不确定因素；不确定性

12. **provisional** [prə'vɪʒnəl] *adj.*

    arranged for the present time only and likely to be changed in the future 临时的，暂时的

13. **medication** [ˌmɛdɪ'keɪʃn] *n.*

    a substance used for medical treatment, especially in the form of a pill, liquid, or injection 药物

14. **rapport** [ræ'pɔːr] *n.*

    a friendly relationship in which people understand each other very well 亲善；融洽；和谐

15. **palpation** [pæl'peɪʃn] *n.*

    a method of examination in which the examiner feels the size or shape or firmness or location of sth. (of body parts when the examiner is a health professional) 触诊，扪诊

16. **percussion** [pə'kʌʃn] *n.*

    tapping a part of the body for diagnostic purposes 叩诊

17. **auscultation** [ˌɔːskəl'teɪʃn] *n.*

    the process of listening to sb.'s breathing using a stethoscope 听诊

18. **retain** [rɪ'teɪn] *v.*

    to continue to have sth. 保留

19. **pathology** [pə'θɒlədʒi] *n.*

    the scientific study of diseases 病理学

20. **apnea** [æp'nɪə] *n.*

    transient cessation of respiration; especially sleep apnea【临床】呼吸暂停

21. **neurological** [ˌnjʊərə'lɒdʒɪkl] *adj.*

    relating to nerves or to the science of neurology 神经系统的；神经（病）学的

23. **heuristics** [hju'rɪstɪks] *n.*

    a method of solving problems by finding practical ways of dealing with them, learning from past experience 探索法；启发式

24. **backseat** ['bæk,siːt] *n.*

    an inferior position 次要位置

25. **diagnose** ['daɪəgnəʊz] *v.*

    to identify the nature of (an illness or other problem) by examination of the symptoms 诊断

Chunk List

Collocations

1. **health care** 医疗保健

    Good health care is of primary importance.
    良好的医疗保健至关重要。

2. **rule out** 排除

    Physical and eye examinations, with special attention to cardiac and blood-pressure problems, should be performed annually to rule out serious medical conditions. 每年应进行身体和眼睛检查，特别注意心脏和血压问题，以排除严重的疾病。

3. **share with** 与……分享

    I shared the masks with my family members. 我与家人分享了口罩。

4. **pick up** 发现，识别

    Scientists can now pick up early signs of the disease. 现在科学家能够辨认这种疾病的早期症状。

Exercises

I. Reading Comprehension

Directions: Select the best choice for each of the questions below.

1. What is the main purpose of diagnosis in health care?
    A. To determine the protocol for patient treatment.
    B. To designate a specific condition.

C. To collaborate with the patient and other sources of information.

D. To rule out differential diagnoses.

2. What is a working diagnosis?

A. It is a final diagnosis that is verified by risky or invasive tests.

B. It is a provisional diagnosis that is modified and refined with further incorporation of data.

C. It is a differential diagnosis that is ruled out by additional diagnoses.

D. It is a hypothetical diagnosis that is established by backward reasoning.

3. What are the sources of information that are used in the diagnostic process?

A. The clinical history, physical examination, diagnostic testing, and consultation with other clinicians.

B. The patient's symptoms, risk factors, state of health, and outcome of treatment.

C. The patient's medical history, family history, social history, drug and medication history, and supplement history.

D. The patient's inspection, palpation, percussion, and auscultation.

4. What is the meaning of diagnostic verification?

A. It refers to comparing the diagnosis with the various signs and symptoms.

B. It refers to evaluating how well the diagnosis fits the patient's risk factors and state of health.

C. It refers to proceeding with only those tests that are justified by the expected information and impact on patient outcomes.

D. All of the above.

5. What is the role of history taking in diagnosis?

A. It is a skill that is fundamental to diagnosis and building a relationship with the patient.

B. It is a process of obtaining or verifying the patient's medical history.

C. It is a type of clinical history that includes the current or presenting symptom.

D. All of the above.

6. What is the role of physical examination in diagnosis?

A. It continues the diagnostic process by adding information obtained by inspection, palpation, percussion, and auscultation.

B. It helps determine the next diagnostic step, including diagnostic testing.

C. It helps build further trust with the patient.

D. All of the above.