

PRE-CLINICAL CLERKSHIP, YEAR 1, Physical Examination

Session Two B How to Use the Otoscope Cheryl A. Walters, M.D.

1. Learning Objectives

- To identify the external structures of the ear and the landmarks of the tympanic membrane.
- To practice handling the otoscope.
- To describe and appreciate the normal tympanic membrane light reflex and boney landmarks.
- To begin to develop a flow for the head to toe exam.

2. Student Prep

How to Use the Otoscope

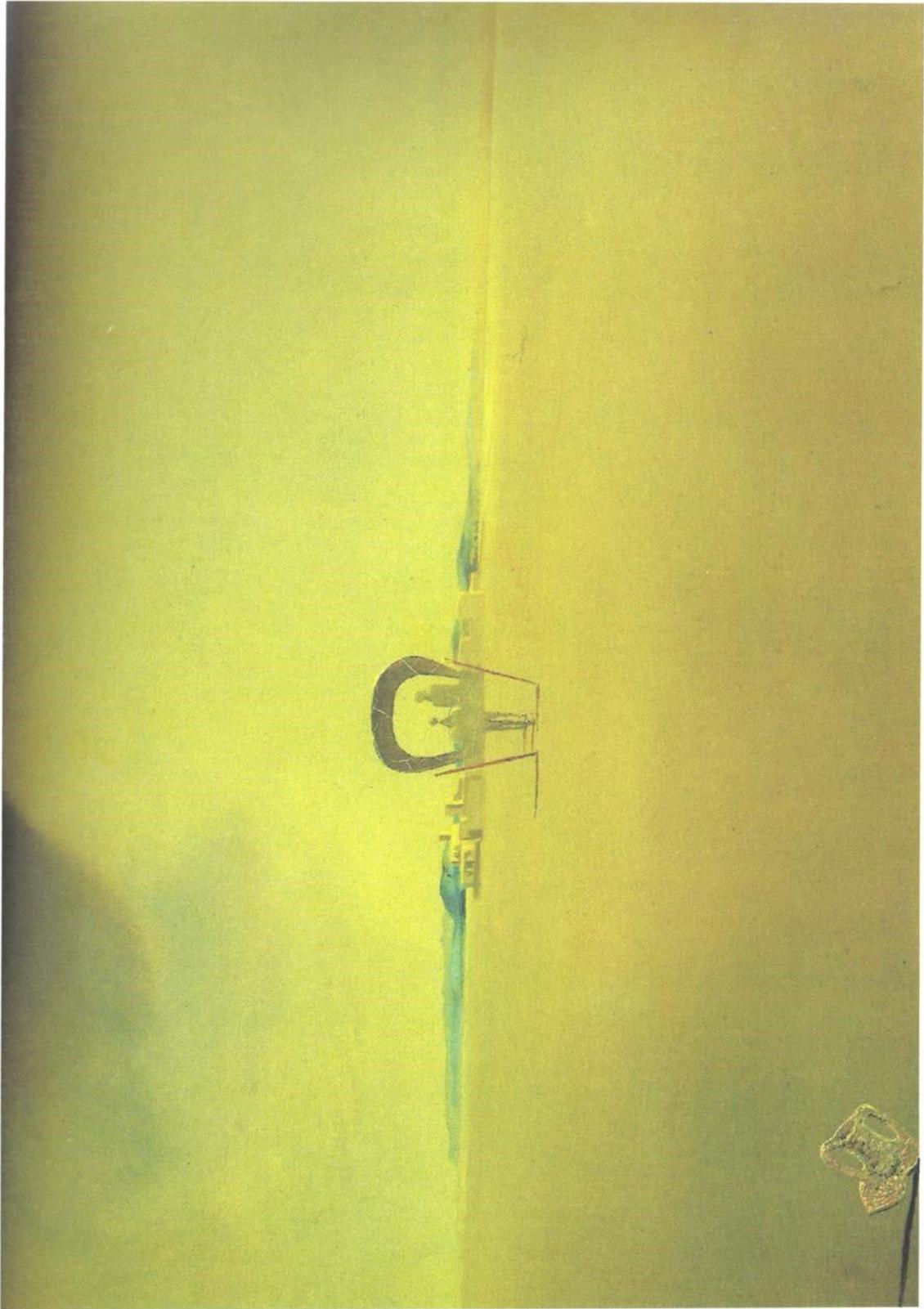
Read pp. 289-293, 302-310, Chapter 11 The Ear and Nose

View the companion portion of the CD

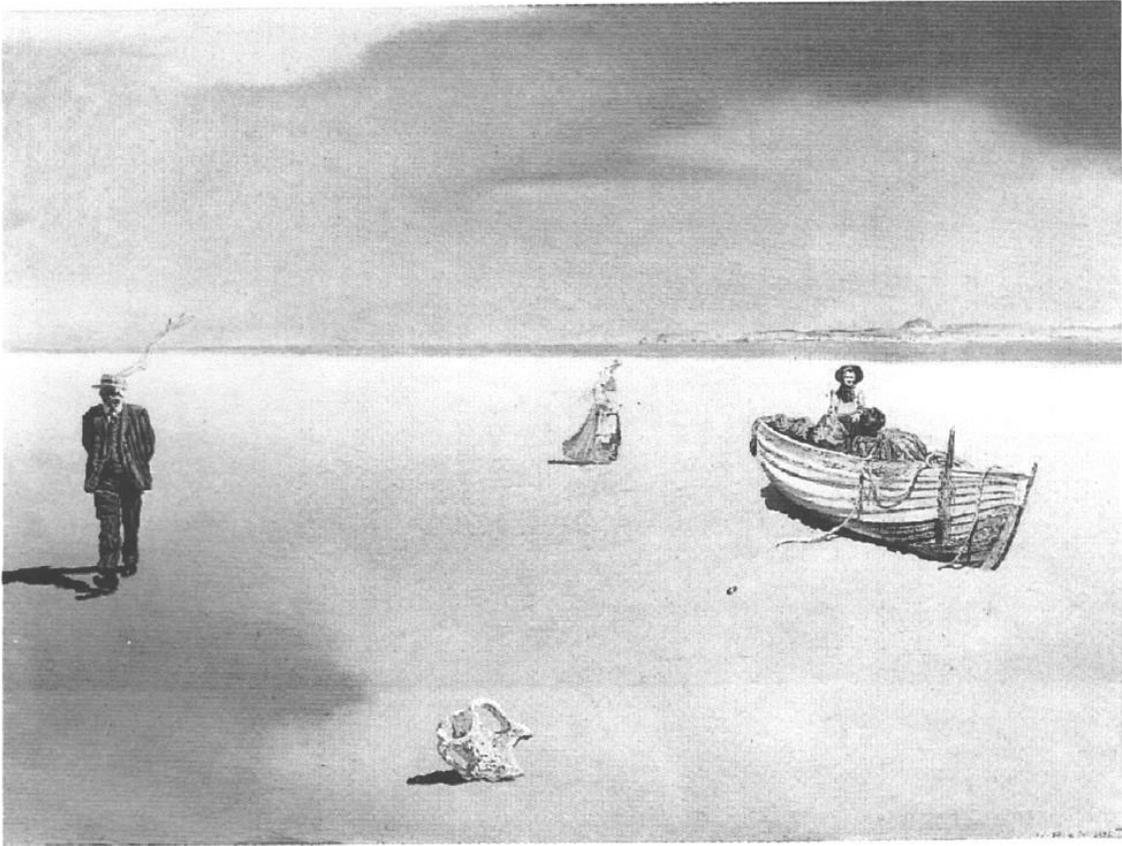
Practice Exercises: Practice training your eyes to see clinically by detecting the same key feature, in this case an object, in a variety of contexts. The object is an ancient amphora pictured below. The object appears in several Salvador Dalí paintings. Practice detecting the object in four Salvador Dalí paintings presented in order of increasing complexity.



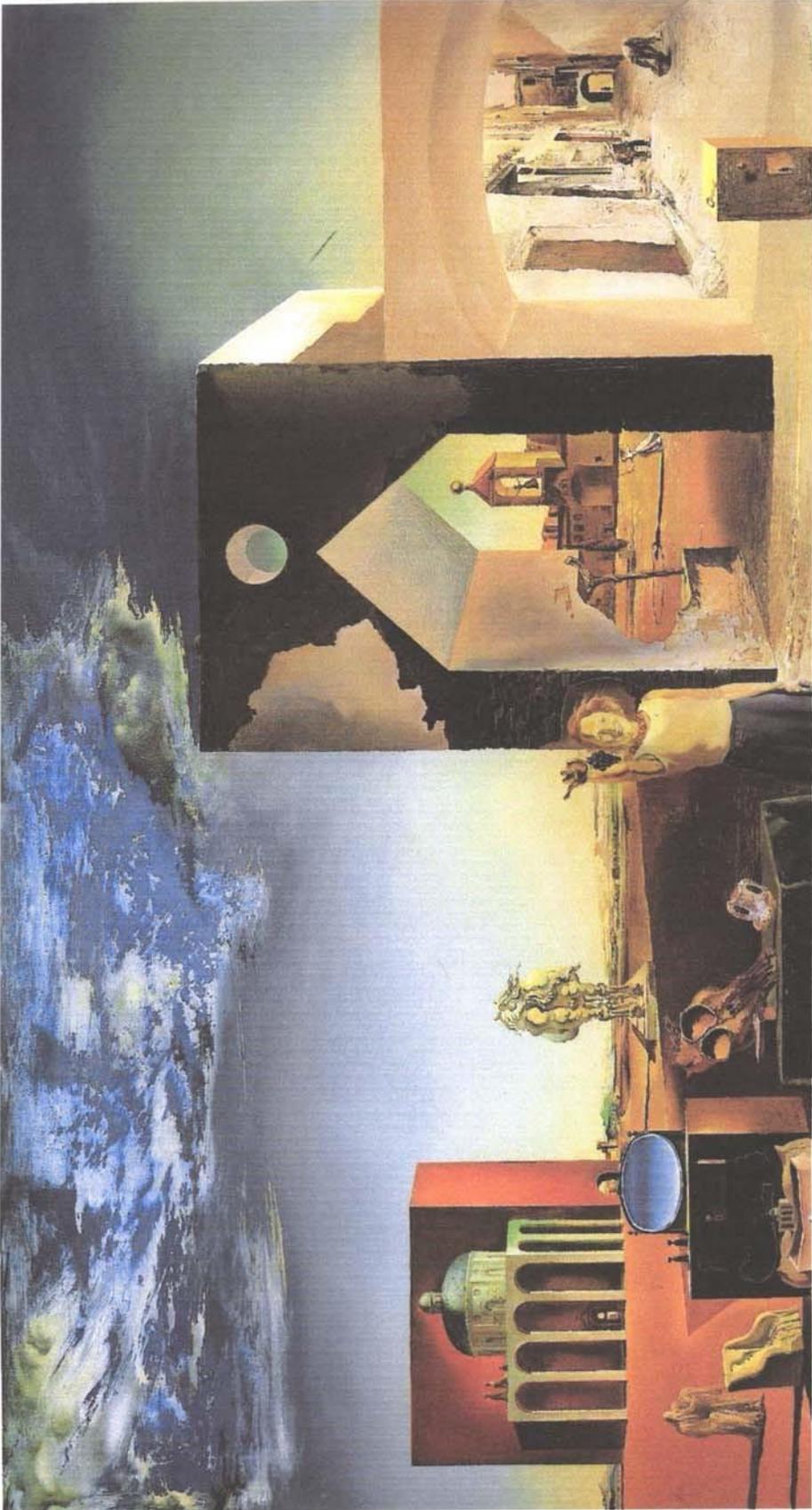
Amphora



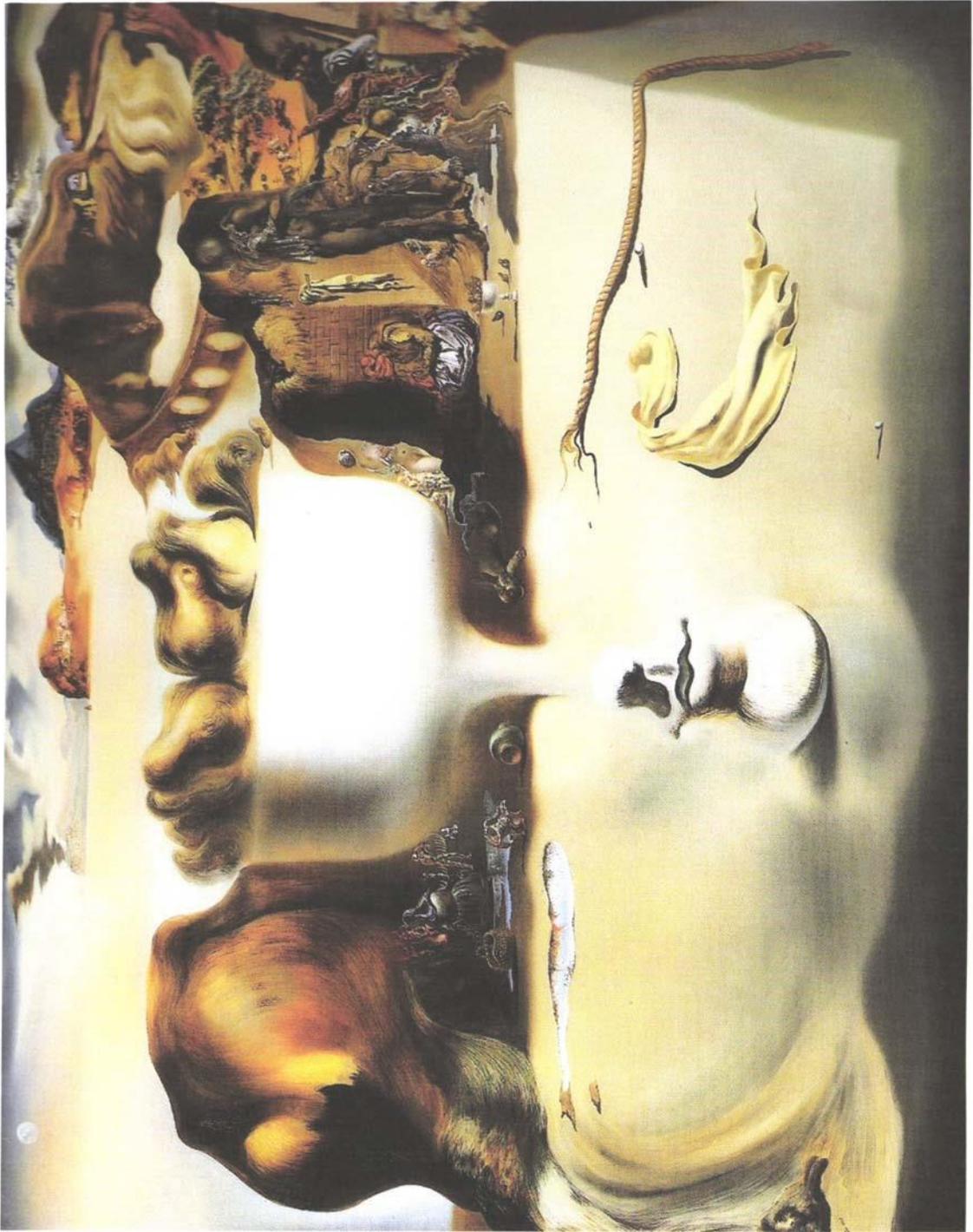
Salvador Dalí # 1



Salvador Dalí # 2



Salvador Dalí#3



Salvador Dalí # 4

3. Clinical Anatomical Landmarks

Ear

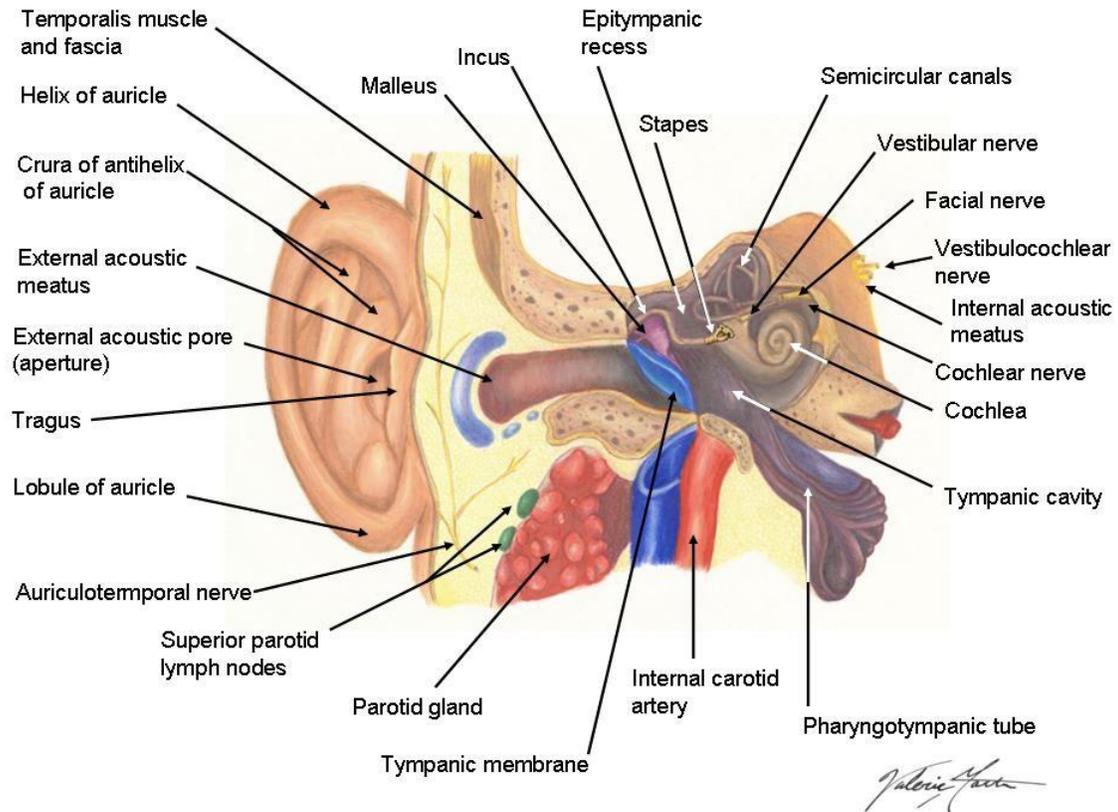
Auricle

upper cartilaginous portion, lobe, external auditory canal (or external acoustic meatus)

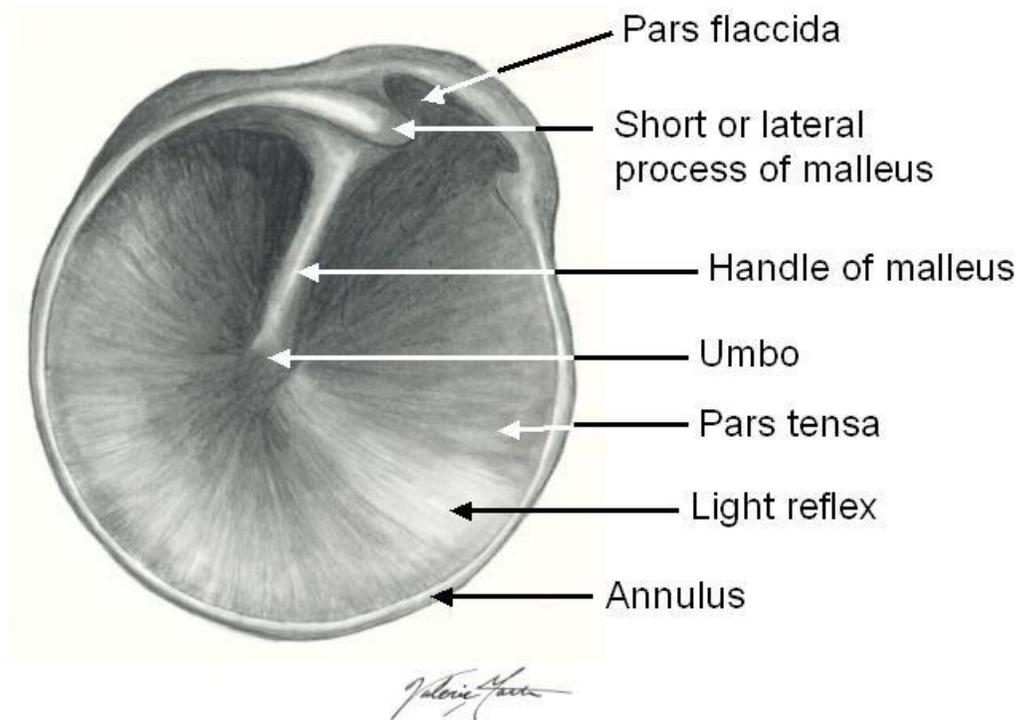
Tympanic membrane

light reflex, malleus, umbo

Auricle (view of right auricle and coronal section showing internal structures)



Structures of the Tympanic Membrane (view of right TM)



4. List of Maneuvers to be Demo/Practiced

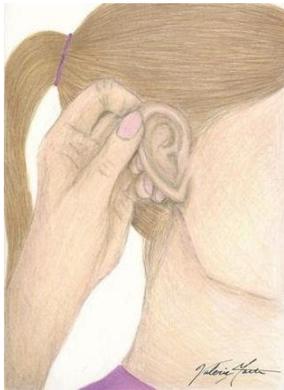
Ears

- Test auditory acuity to the spoken word bilaterally.
- Inspect auricles and postauricular regions bilaterally.
- Insert and stabilize the speculum of the otoscope without causing pain to the patient.
- Inspect the external auditory canals, TM light reflex and bony landmarks bilaterally.

5. Procedural Tips

Handling of the otoscope: Demonstrate with explanation, and observe and guide students through the following steps to help them begin to become comfortable holding the otoscope, inserting the speculum and stabilizing and positioning the scope to ensure the comfort of the patient and an adequate view.

1. In the patient age three or older, first straighten the external auditory canal by gently pulling the auricle up/out/back (In the child age three or under, gently pull down to straighten the canal.).
2. To inspect the external auditory canal, stabilize the handle of the scope parallel to the patient's head, and insert the speculum to about one third of its length. Be careful to proceed very slowly and gently because the external canal is sensitive to pressure. Next, slowly rotate the speculum for a complete view of the tympanic membrane (TM).



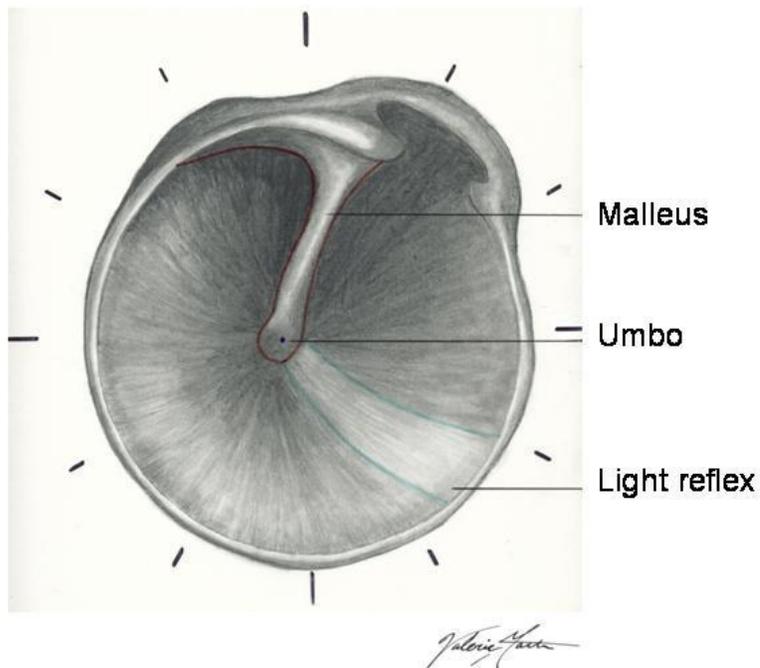
1.



2.

6. Perceptual Tips

Inspection of the TM light reflex and boney landmarks: Use the double-headed teaching otoscope to illustrate viewing the whole TM in the patient age three or older, by gently pulling the auricle up/out/back to straighten the external auditory canal. (In the child younger than age three, pull the auricle down to view the TM.) Identify the light reflex and boney landmarks of the TM's bilaterally. The light reflex in the right ear should be between 4 and 6 o'clock, and in the left ear between 6 and 8 o'clock. The malleus is a dense white linear streak at 12 o'clock. Locate the umbo, the inferior point of the malleus, at the top of the light reflex.



View of Right Tympanic Membrane

7. Description of Key Features

Ears: auditory acuity to spoken word bilaterally, air and bone conduction (Rinne and Weber will be tested in the neurology exam), external appearance of auricles (pinnae), external canals, appearance of tympanic membranes (clarity, bony landmarks, light reflex), movement of membranes (especially pars flaccida)