



PRACTICAL HISTOLOGY 1 - FIRST COURSE

LAB -11- BONE

Sawa University

جامعة ساوة الاهلية

College of health and medical techniques

كلية التقنيات الصحية والطبية

Department of Medical Laboratories

قسم تقنيات المختبرات الطبية

First stage

المرحلة الاولى

محاضرة رقم 11

الجانب العملي

Lecture No. 2

Practical

تدريسي المادة : م.م هبه صاحب صادق

Aims of lecture :-

- THE AIMS OF A LECTURE ON BONE CAN VARY DEPENDING ON THE LEVEL AND FOCUS (E.G., GENERAL ANATOMY, ORTHOPEDICS, PATHOLOGY),
- BUT GENERALLY THEY COVER THE FUNCTIONS, STRUCTURE, AND DEVELOPMENT OF BONE TISSUE.

Bone:is a strong, flexible and semi solid supporting tissue It

— can resist

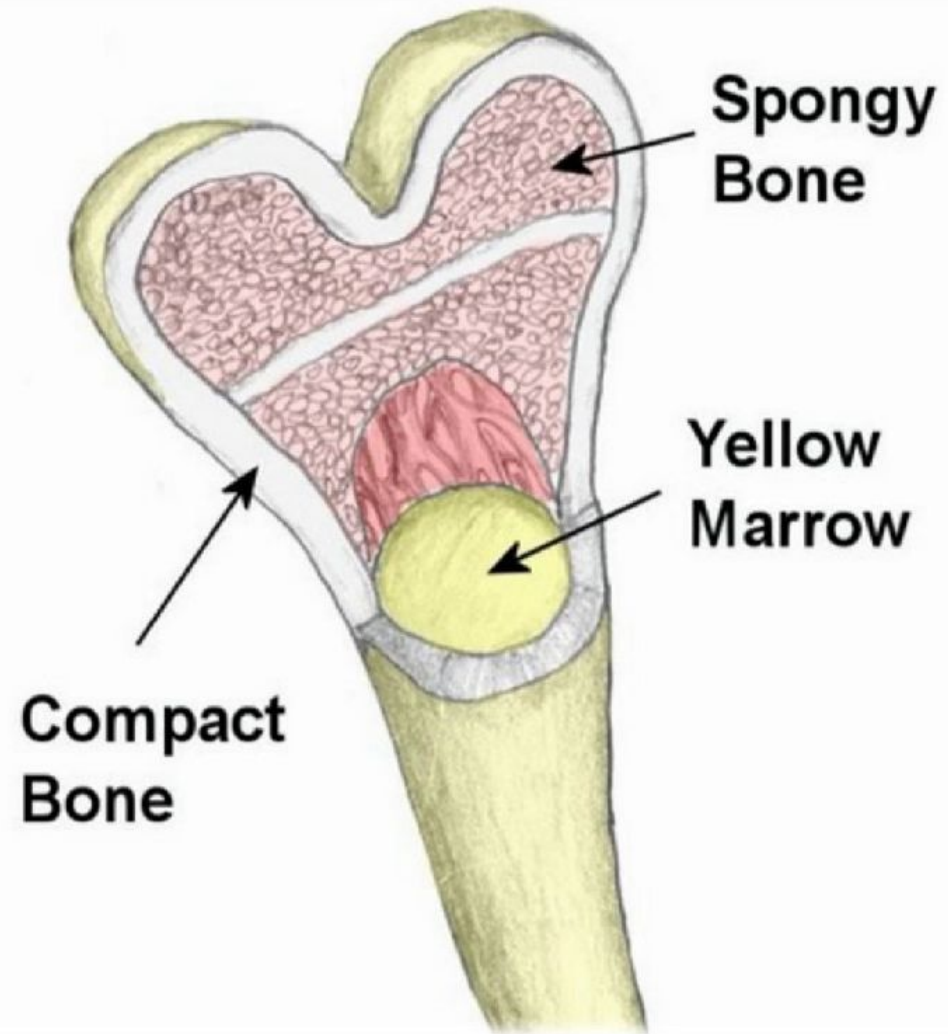
compression forces as other types of connective tissue,

bone is made up of Cells and Extracellular matrixmatrix.

Cells.which in bone are called osteoblasts and osteocytes

Types of bone:

- 1-Compact bone which is found in the shafts of long bones (in the diaphysis This makes up 80 of all bone
- 2-Spongy (bone which is found at the ends of long bones (in the epiphysis This makes up 20 of all bone



- ✓ This type of bone contains red bone marrow and a network of bony trabeculae

1.A **periosteum** is found on the outside of bone This is a dense fibrous layer

2.The **endosteum** is the name given to the tissue that lines the inner surfaces of bones

3. Osteoblasts lining the surface of bone, secrete collagen

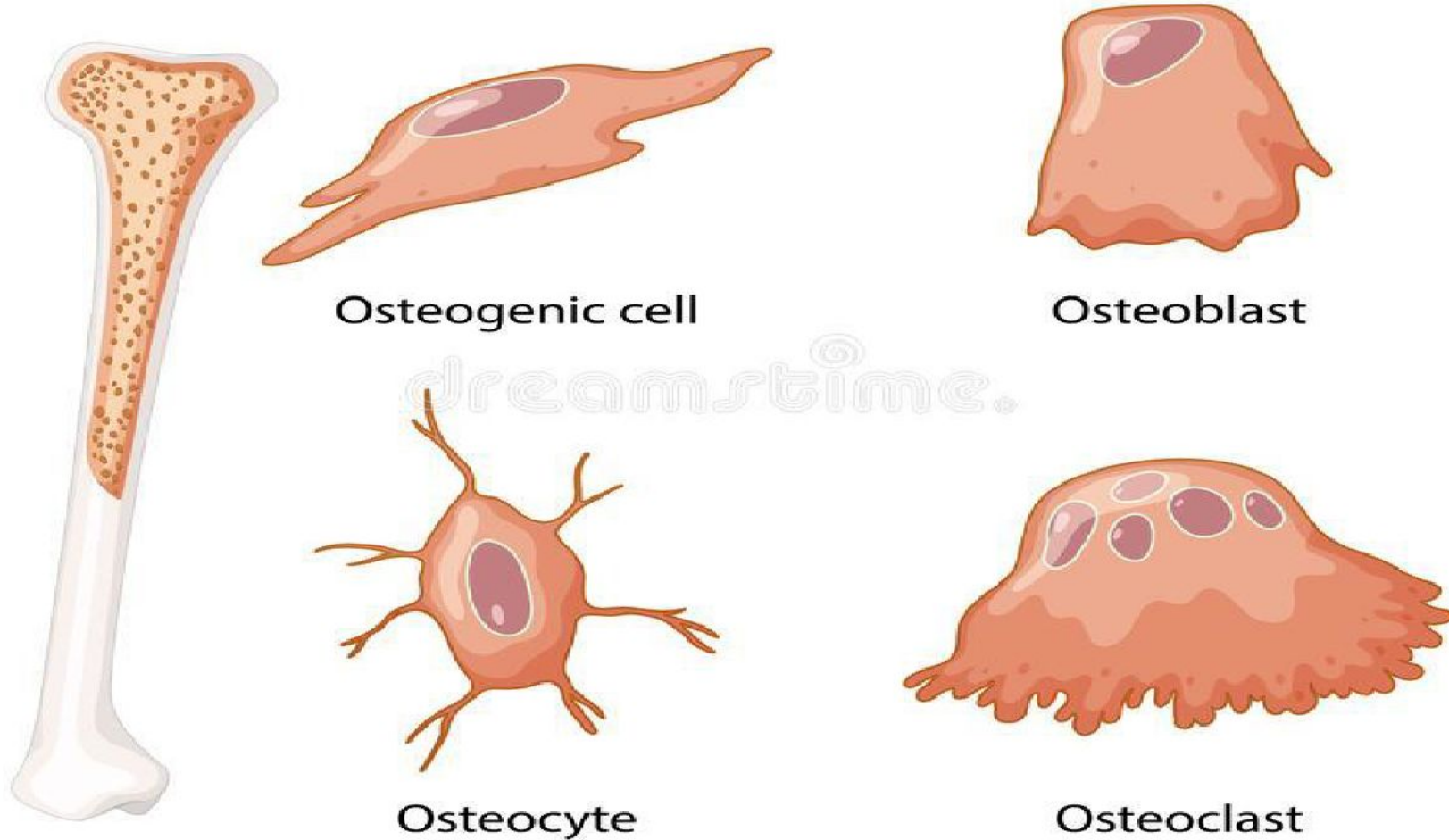
— and the organic matrix of bone(

4. Osteocytes maintain fine bone tissue ramify processes

from these cells through bone, and form gap junctions with

others osteocytes

Human Bone Cells



❖ Ossification

- Intramembranous ossification bone is formed by direct replacement of mesenchyme
- Endochondral ossification cartilage model serves as the precursor of bone

Discussion :-

- 1-What is the study of bone structure?
- 2- Why is bone structure important to understand?

References

- Pathologic basis of diseases, A57 edition, 2012.
- <http://waynesword.palomar.edu/images/plant3.gif>.

Any questions?

*Thank
You*