



PRACTICAL HISTOLOGY 1 - FIRST COURSE

LAB -12- BONE MARROW

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 12

Lecture No. 2

الجانب العملي

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.

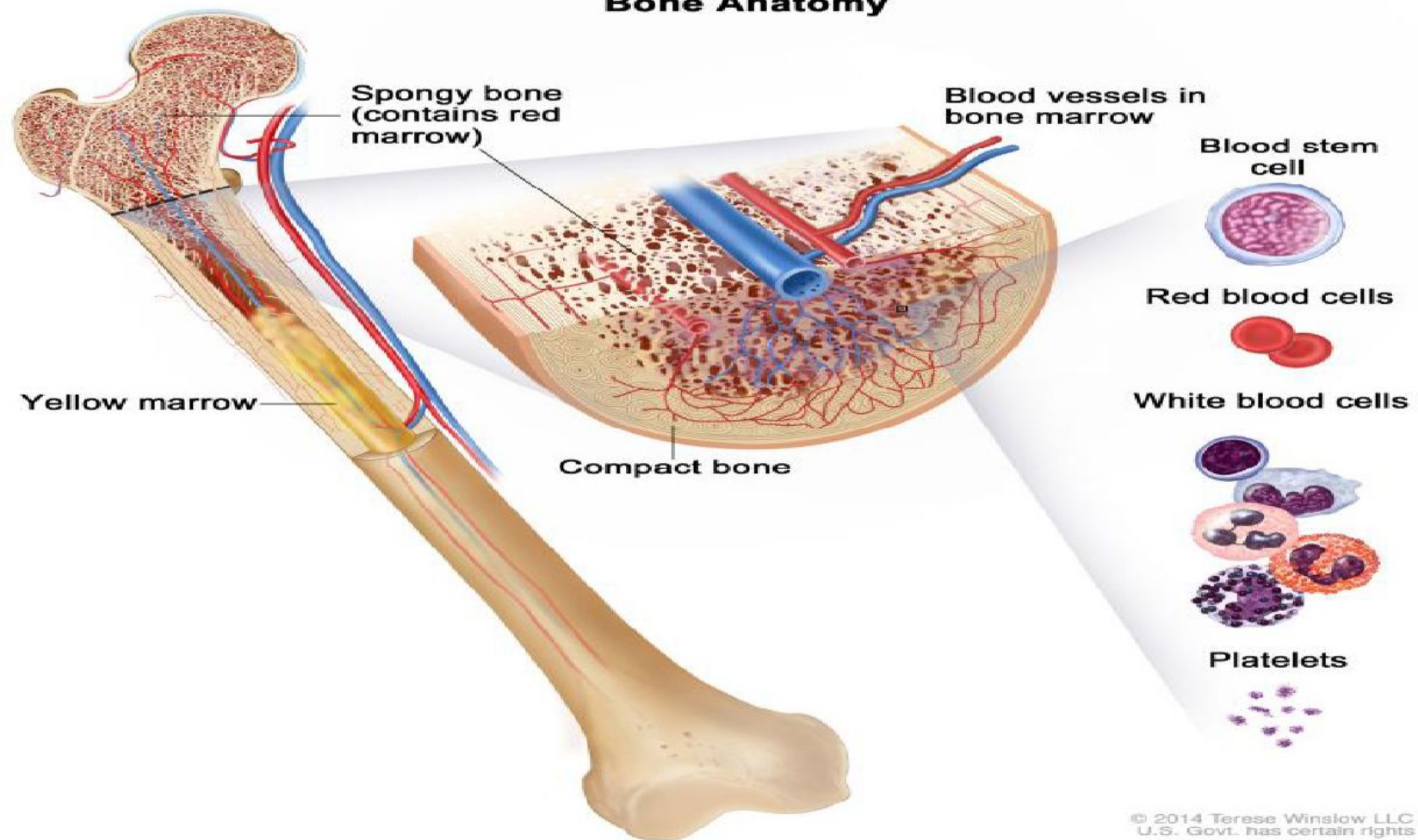
Bone Marrow

Bone marrow is a dense, spongy tissue located in the cavities of

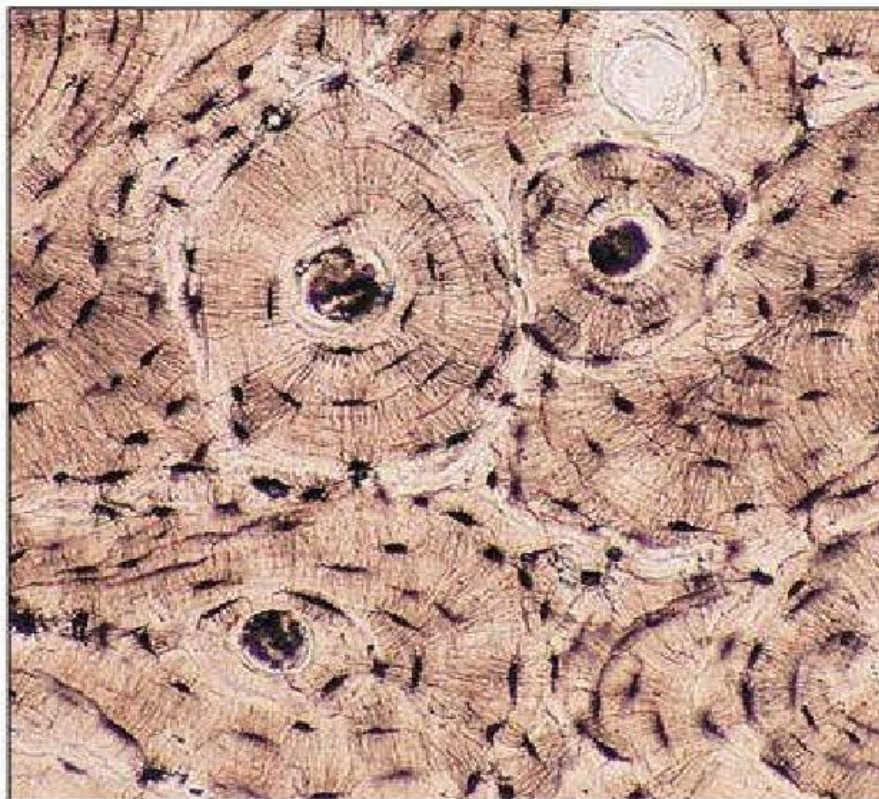
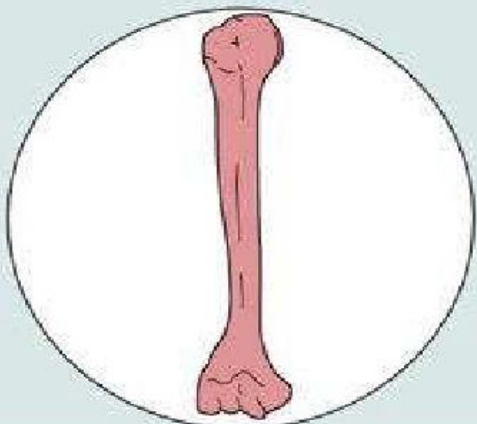
— bones Bone marrow is where blood cells are produced and where stem cells

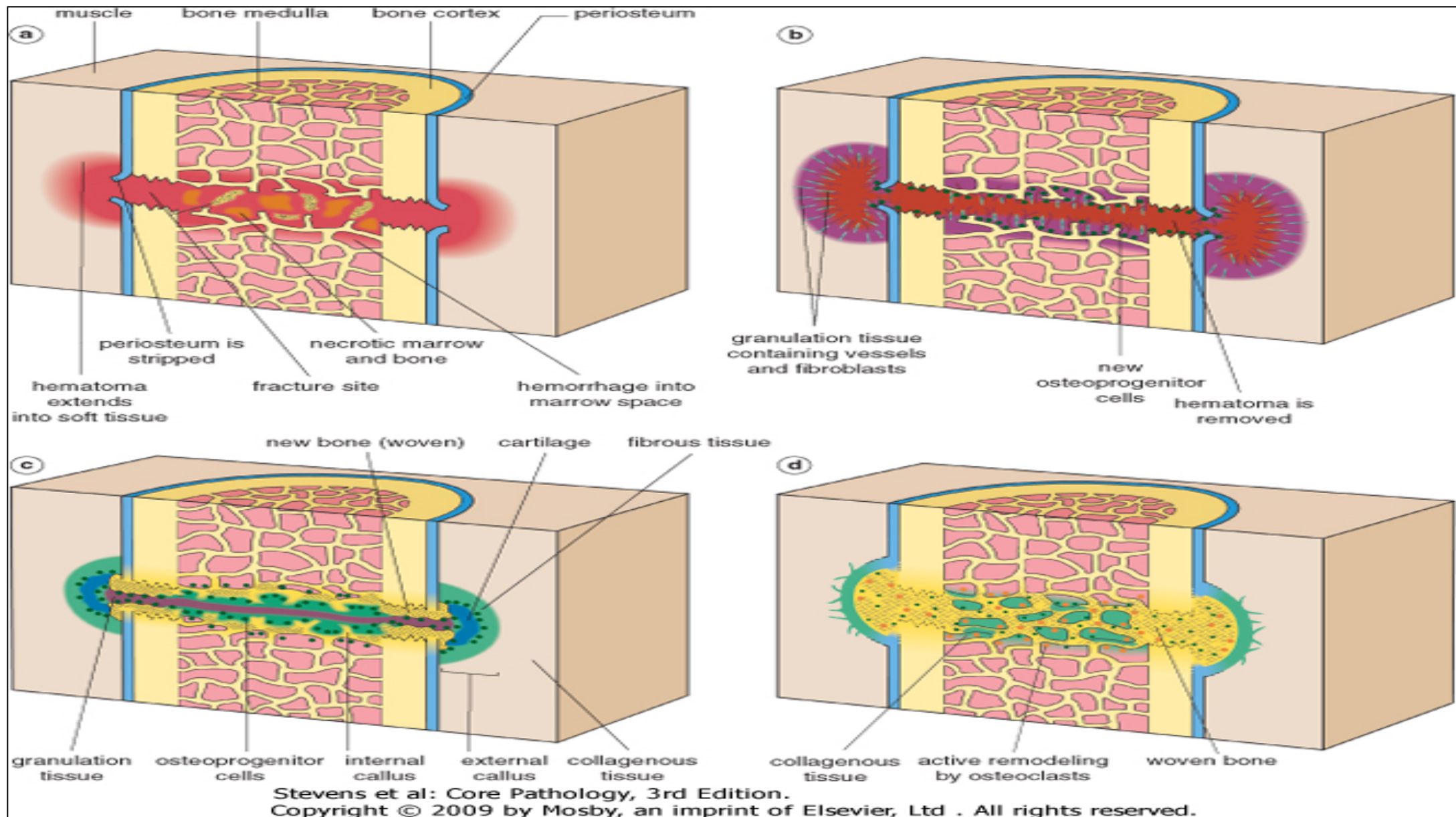
- There are two types of bone marrow Red bone marrow and Yellow bone marrow
- Bonemarrow is responsible for the production of blood cells a process known as hematopoiesis

Bone Anatomy



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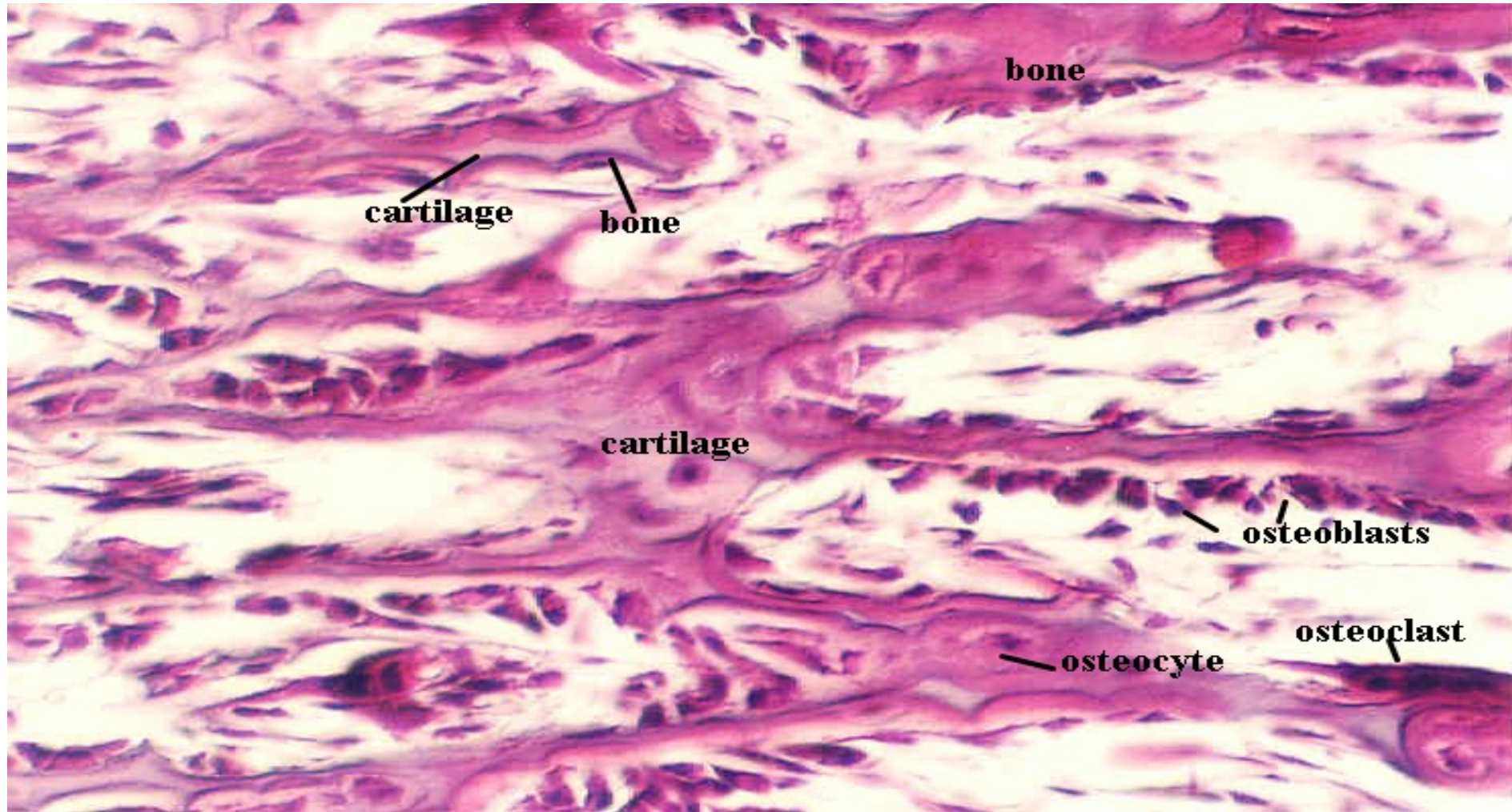
- Bone remodeling

Beginning about 8 to 12 weeks after the injury, the fracture site

remodels itself, correcting any deformities that may remain as a result of the injury. This final stage of fracture healing can last up to several years.

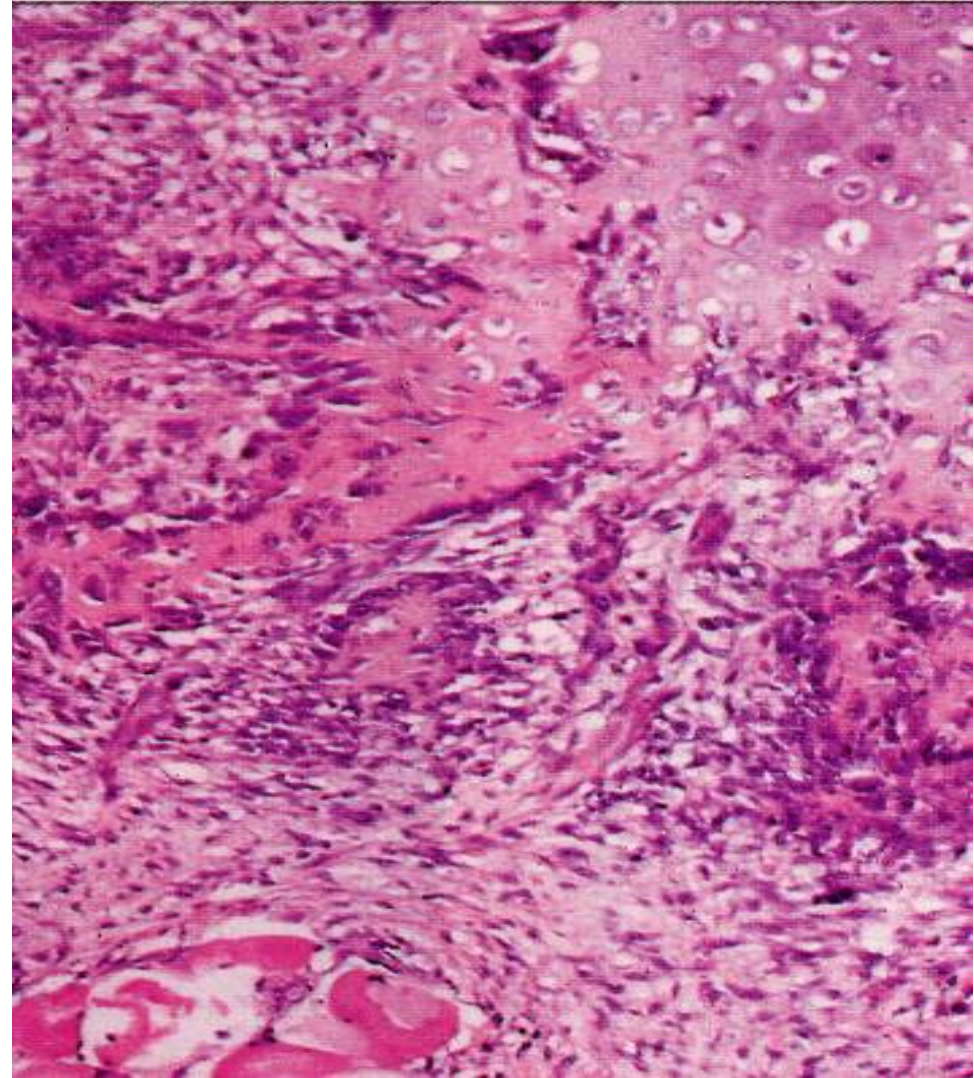
- The rate of healing and the ability to remodel a fractured bone vary tremendously for each person and depend on your age, your health, the kind of fracture, and the bone involved. For example, children are able to heal and remodel their fractures much faster than adults.

Endochondral Bone Formation



FRACTURE HEALING

- HAEMATOMA
- INFLAMMATION
- SOFT CALLUS
- 2 weeks
- 10% strain at failure





www.bonfixator.com

Stage 1 : Impact

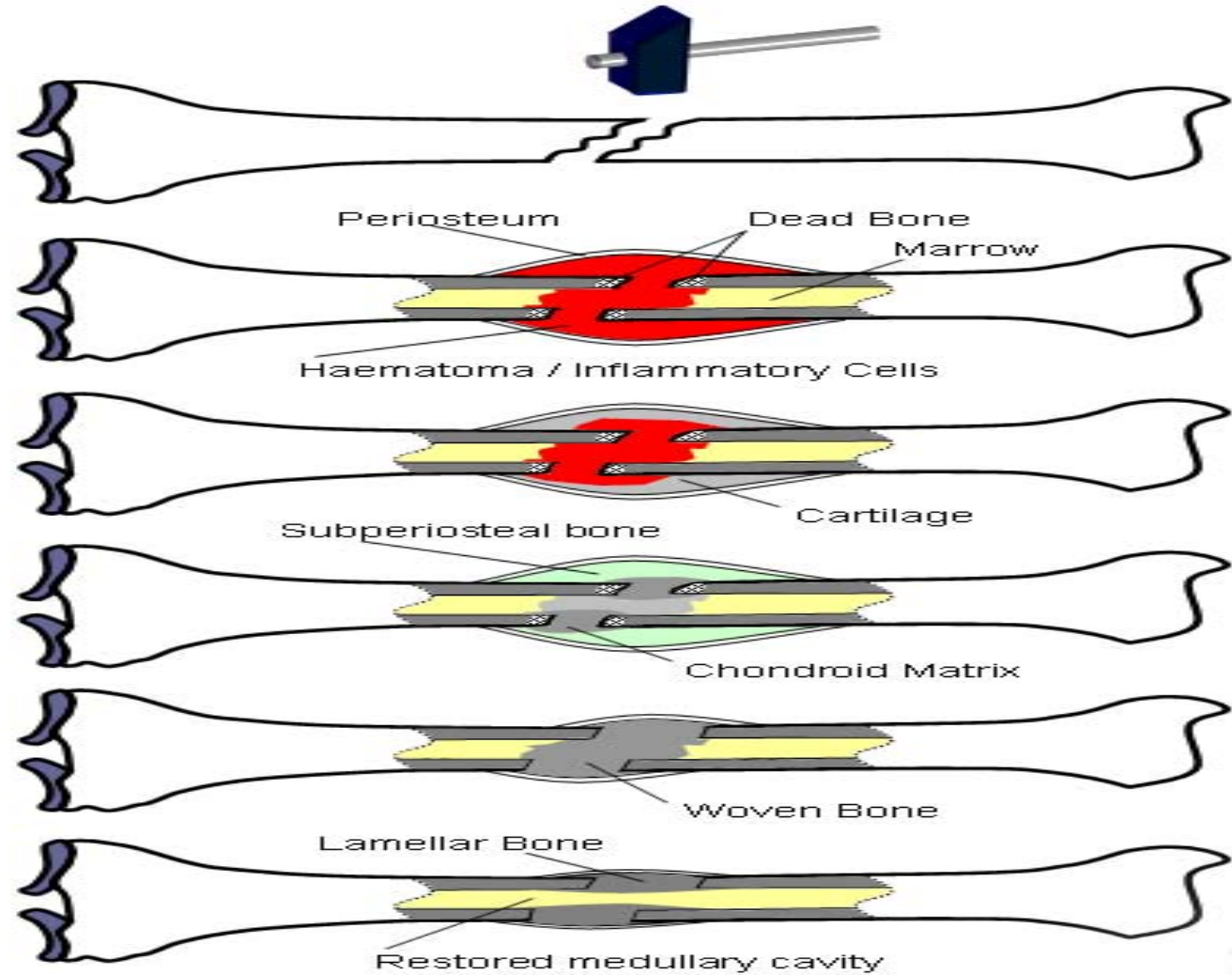
Stage 2 : Induction

Stage 3 : Inflammation

Stage 4 : Soft Callus

Stage 5 : Ossification

Stage 6 : Remodelling



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*