



Al-Mustaqbal University
College of Science
Forensic Evidence Department
Second Stage



جامعة المستقبل
AL MUSTAQBAL UNIVERSITY

كلية العلوم قسم الادلة الجنائية

Lecture (4)

عنوان المحاضرة

المادة : انسجه عملي .

المرحلة : الثانية

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Proper Connective Tissue:

They include: Dense connective tissue - A This tissue is classified according to the arrangement of fibers in it to: - Dense irregular connective tissue¹. This tissue is a large part of the dermis, the fibers intertwined irregularly and in different directions so it resists stress in different directions. white fiber is the dominant part of this tissue, but fewer yellow and reticular fibers can be observed. The tissue is similar to the areolar connective tissue, but the bundles of white fibers are thicker and more compact, appearing in different levels of pieces, including longitudinal, transverse, and diagonal irregular arrangement.

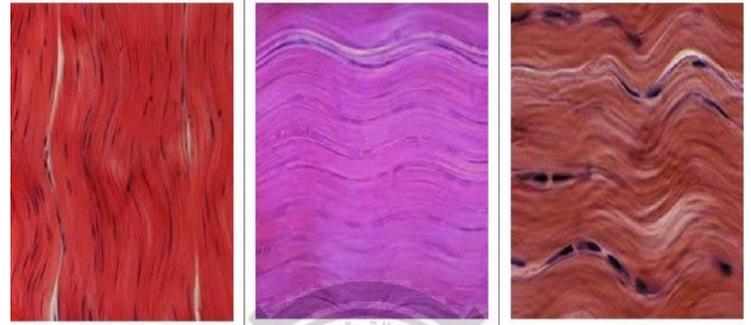
and in Dermis of human skin

يوجد في ادمة جلد الأتسان



2-Dense regular connective tissue: The fibers are arranged in a regular way and thus resist the tension from one direction only. This tissue is classified into two types relative to the type of fibers prevailing in it to:

1- White fibrous connective tissue : Tendons that connect muscles with bones The majority of the tissue consists of bundles of white fibers arranged parallel to each other. Among these bundles are fibroblasts, which in this tissue are called tendon cells, whose nuclei form as longitudinal rows parallel to each other. This is in the longitudinal section of the tendon, while the stellate-shaped tendon cells appear in the cross-section of the tendon.



The dominant type of fibers are White collagenous fibers

اللياف السائدة هي من النوع الغراوية الأبيض

2- Elastic connective tissue This type is found in the ligaments, which connect the bones to each other. It consists of thick, elastic branched yellow fibers.

Specialized connective tissues They include: -

1. Skeletal connective tissue:

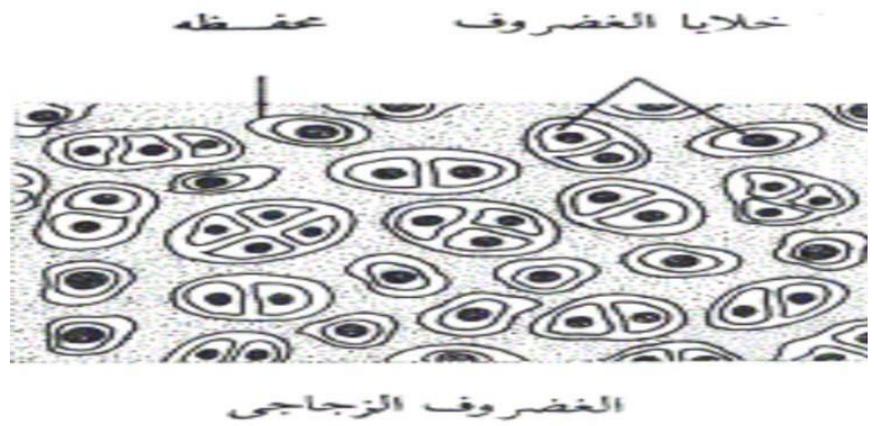
Also named because it enters into the structure of the body and includes cartilage and Bone and the interstitial material in both solid.

a-Cartilage:

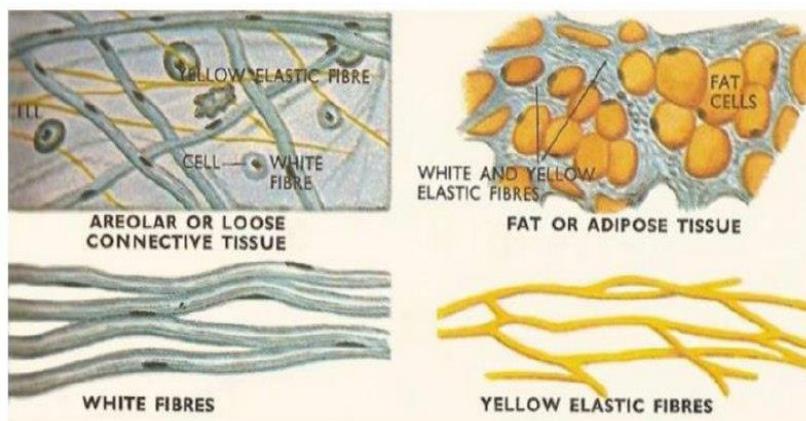
It is a strong specialized structural connective tissue consisting of cells called chondrocytes or cartilage cells and a basic material containing fibers. Cartilage is most of the structure of the body in the fetal life of the individual and replaces most of the bone in the adult, but remains in the cartilage above the surfaces of bone joint and form a support structure of the corridors of the respiratory and part of the ear, and cartilage surrounded by a fibrous cover called perichondrium and be in three types:

Hyaline cartilage-

found in the Trachea is surrounded by a vascular fibrous membrane that contains bundles of white fibers, fibroblasts and blood vessels. This is called perichondrium The interstitial material is transparent and accepts the base dyes. It also contains Lacunae gaps, which contain cells called chondrocytes These cells exist either individually or in the form of cell groups that form the so-called cell nest. Cells near the periosteum are flat and at a level parallel to the surface of the tissue. These cells are called chondroblasts .



2 - Elastic cartilage The outer ear flap is similar to the hyaline cartilage, but it is more opaque and the intercellular material contains a network of elastic (yellow fibers) branched and intertwined that gives flexibility and elasticity to the cartilage and yellow color. These fibers are concentrated around the cartilage cells more than in other regions.

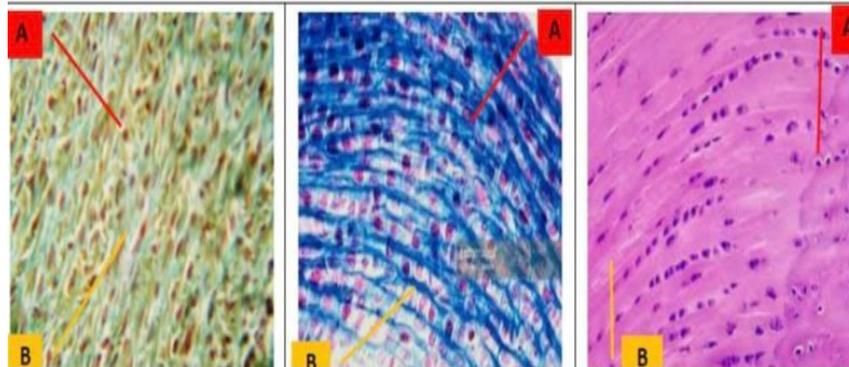




In areas that need strong support such as intervertebral discs, the base material contains bundles of white fibers that are almost parallel to each other and are confined to narrow areas containing cartilage cells in their gaps. In this type of cartilage, there is a lack of periosteum of the cartilage.



ويوجد في القرص ما بين الفقرات: Found in Intervertebral disc



Practical: