

HISTOLOGY VIRTUAL MICROSCOPY

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CARTILAGE

1. Hyaline cartilage

Trachea (**Cart 2, 3, &4**) and hyaline cartilage (**Cart 1**).

At the periphery of the cartilage are the connective tissue fibers and cells of the perichondrium. (what type of C.T.?) As you proceed inward from the perichondrium, some of the cells appear rounder. These are chondroblasts which are in the process of forming more cartilage matrix at the periphery of the cartilage. Further in, the cells are fully rounded and are situated in larger spaces called **LACUNAE**.

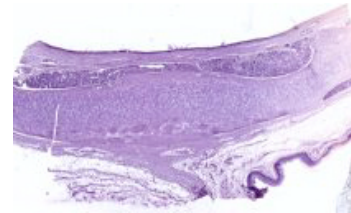


2. Elastic cartilage (**Cart 5, 6, 7, 9, 10 & 11**).

When the number of elastic fibers is sufficient that their fibrous structure can be seen in the matrix, it is called elastic cartilage.

Note that a meshwork of fibers proceeds in from just under the perichondrium to heavily surround lacunae of the mature chondrocytes in the interior of the cartilage.

Slide **Cart 10** is stained with Verhoff's which stains for elastic fibers.



3. Fibrocartilage (**Cart 8**).

This type of cartilage is found in association with the attachment of some tendons and ligaments to bone. Its borders are difficult to see since it lacks a perichondrium and resembles dense fibrous C.T., except that chondrocytes in their lacunae are found between the collagenous fibers.

There is so little cartilage matrix here that the H & E stains do not differentiate fiber from matrix.

