

Cell	Shape	Size	nucleus	Cytoplasm	Function
UMC	flat, spindle shaped,	having processes	oval, pale	basophilic	stem cell for CIT cells
Fibroblast	- branching cells - larger than Focyte	large fusiform - rich in RER - having Golgi	- large oval - pale staining with fine chromatin - prominent nucleolus	Basophilic	Formation: ① CIT Matrix ② Collagenic ③ elastic ④ reticular fibers. "protein synthesizing" cell
Fibrocyte	spindle shape	- fewer processes - smaller than fibroblast - fewer RER	smaller dark elongated	- less basophilic nearly acidophilic.	maintains components of CIT

Cell	Shape	size	nucleus	cytoplasm	function
Macrophage	<ul style="list-style-type: none"> <li>- large oval cell</li> <li>- Irregular surface</li> </ul>	<ul style="list-style-type: none"> <li>with protrusions (pseudopodia)</li> <li>* many lysosomes.</li> <li>- Golgi and RER.</li> </ul>	<ul style="list-style-type: none"> <li>- Eccentric</li> <li>- Oval, kidney shaped.</li> </ul>	<ul style="list-style-type: none"> <li>- Basophilic</li> <li>contains small vacuoles.</li> </ul>	<ol style="list-style-type: none"> <li>① Ingestion.</li> <li>② Digestion.</li> <li>③ Antigen processing and presentation to lymphocyte.</li> </ol>
Mast cells	Oval to round.	<ul style="list-style-type: none"> <li>- has Golgi</li> <li>- Heterogeneous limited membrane</li> <li>- few mitochondria</li> <li>- RER</li> </ul>	<ul style="list-style-type: none"> <li>Small-spherical</li> <li>- Centrally located</li> <li>- obscured by cytoplasmic granules</li> </ul>	<ul style="list-style-type: none"> <li>- Basophilic (تبييض الحامض)</li> <li>- Coarse granules</li> </ul>	<ul style="list-style-type: none"> <li>- having Histamine and Heparin</li> <li>- surface contains specific receptor for IgE.</li> <li>- allergic reaction.</li> </ul>
plasma cell. from B-lymphocyte.	- Oval	<ul style="list-style-type: none"> <li>- large</li> <li>Rich RER and Golgi</li> <li>- Centriol present at the juxtannuclear region</li> <li>قرب النواة</li> </ul>	<ul style="list-style-type: none"> <li>- spherical</li> <li>- Eccentric</li> <li>- have compact coarse chromatin</li> <li>+ light zones = clock-face or carwheel.</li> </ul>	<ul style="list-style-type: none"> <li>- Basophilic</li> <li>- (-ve) Golgi image (pale area)</li> </ul>	production of antibodies

cell	Shape	size	nucleus	cytoplasm	function
Adipose cell	oval rounded cell		flat		storage of fat

## Collagen (in)

type II  
(2)

I  
- loose and reticular CT. (3)

III  
- Blood vessels (3)

- supportive in expansible organ.

I  
- Hyaline and elastic cartilage. (3)

- don't make bundles or fibers.

IV + V + VII (457) = in basement membrane

IV → filter  
V → associated with C. type I  
VII → Linking Collagen.  
- Basal lamina + Fetal membrane

Cell	Stain	Final color
Mast cell	toluidine blue	red.
Adipose cell	haematoxylin + eosin	مزرقة appears vacuolated.
	• Sudan III	Orange
Collagen fibers	—	great amount give → white color.
	eosin	pink
	Malbry-trichrome	blue
	Sirius red	red
Elastic Fibers		long amount gives = yellow.
	orcein	brown.
Reticular fibers	silver	black

