

Adhesive Glycoproteins & Adhesion Receptors

1

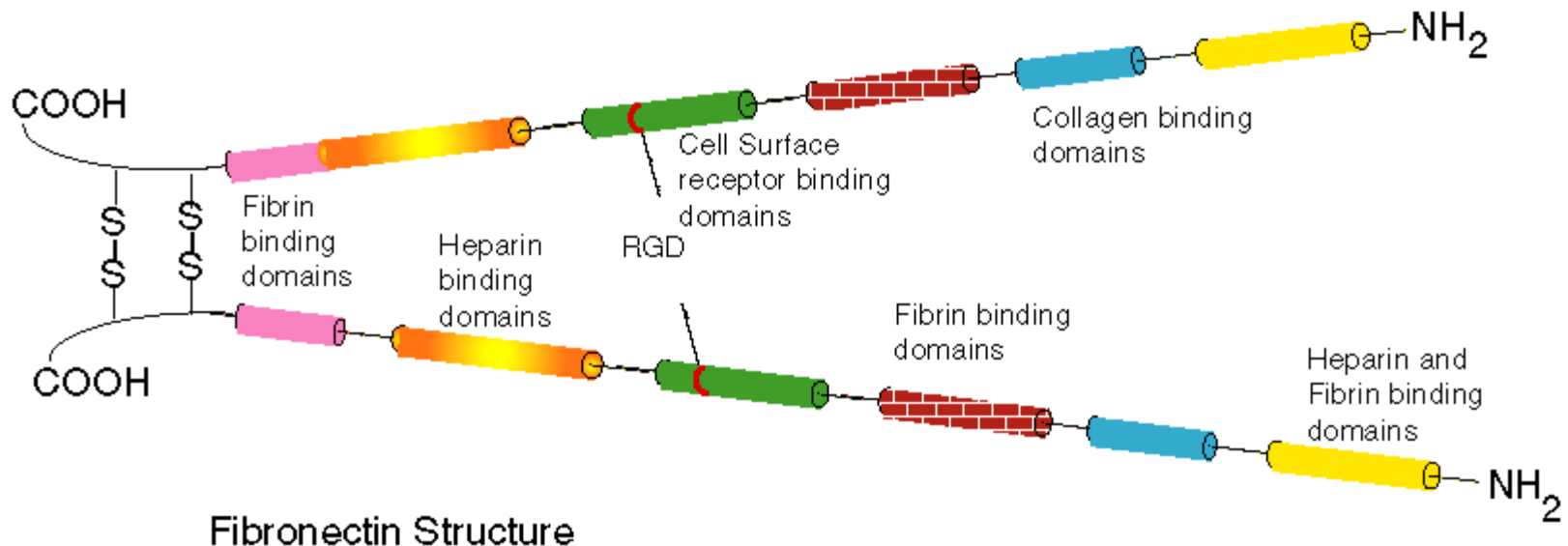
cell-to-cell adhesion

2

cell-to-ECM

3

binding between ECM components



Adhesive Glycoproteins & Adhesion Receptors

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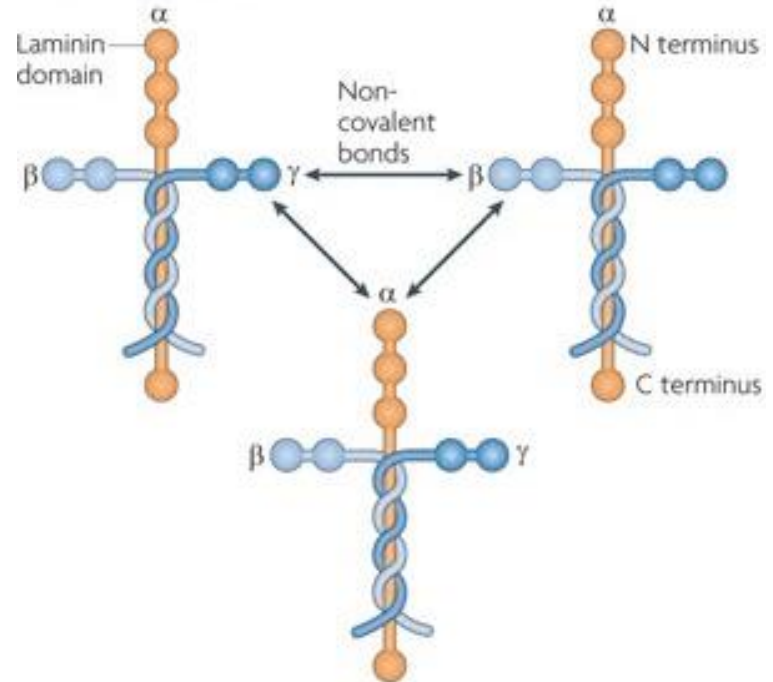
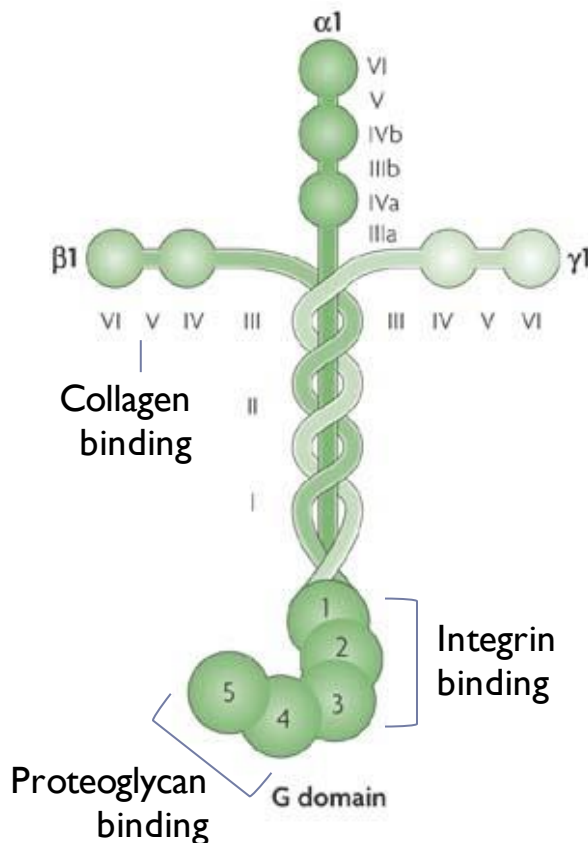
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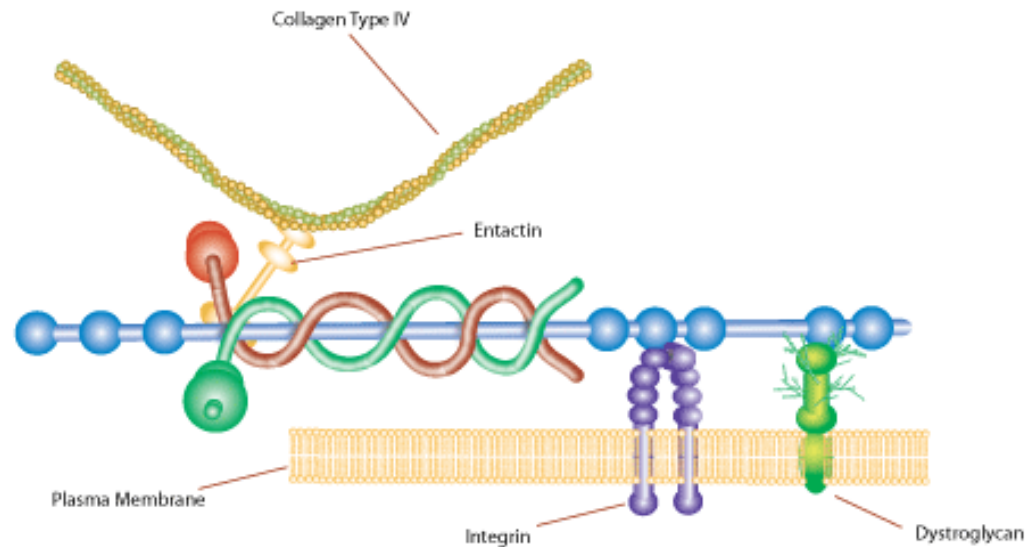
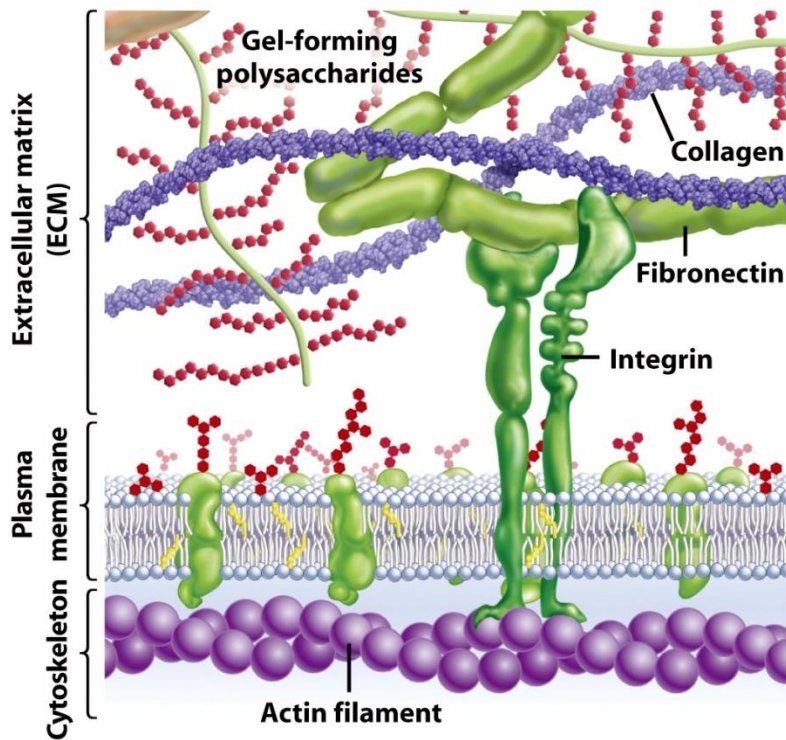
cell-to-cell adhesion

2

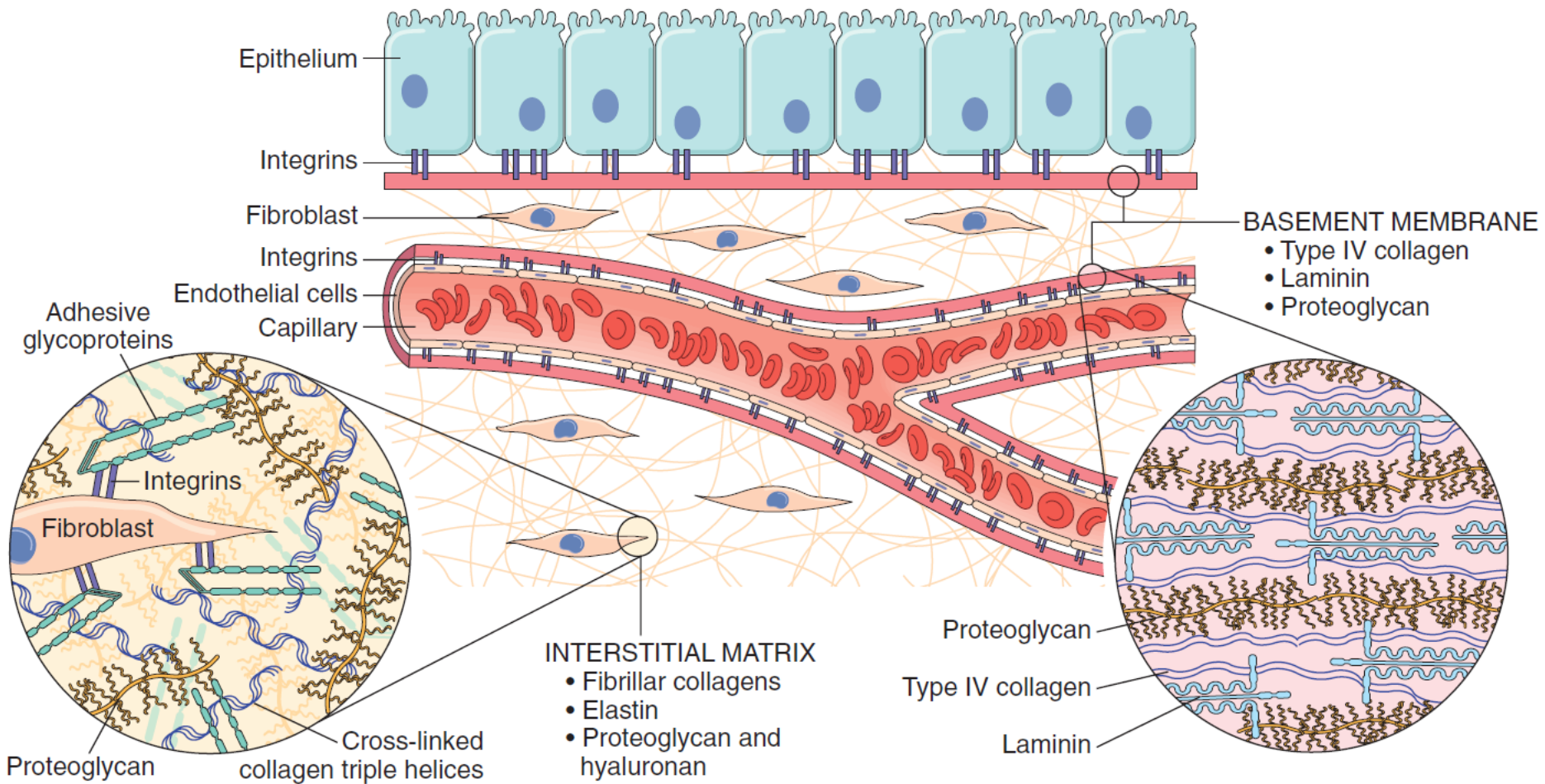
cell-to-ECM

3

binding between ECM components



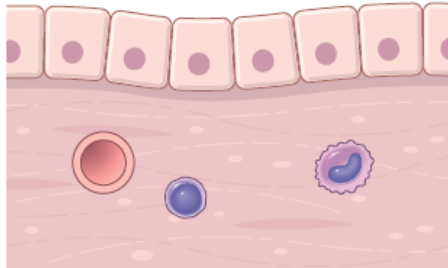
Now this slide makes a lot more sense



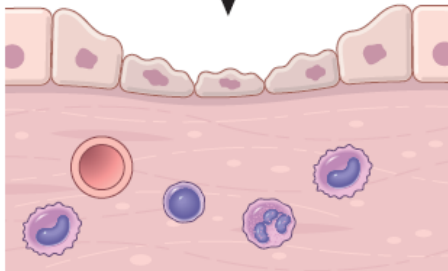


Regeneration

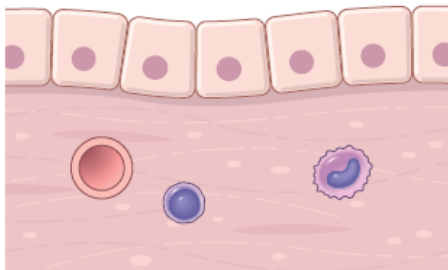
NORMAL



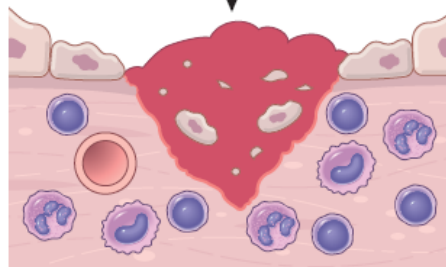
Mild, superficial injury



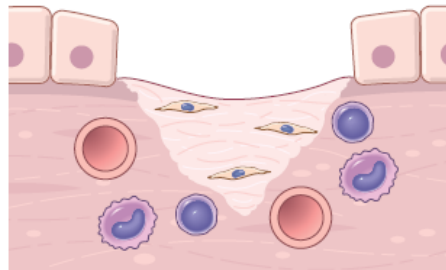
REGENERATION



Severe injury



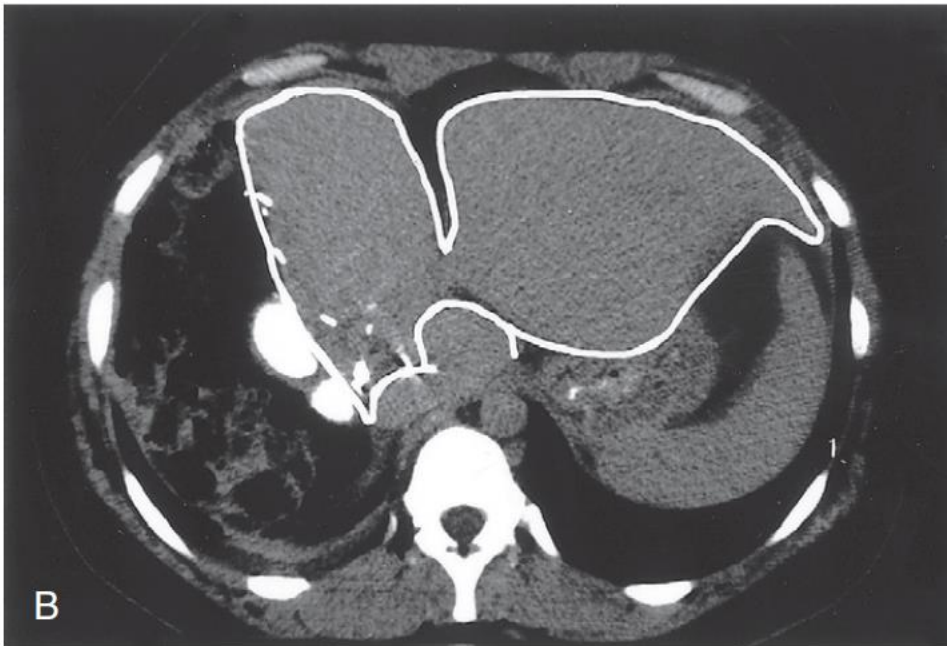
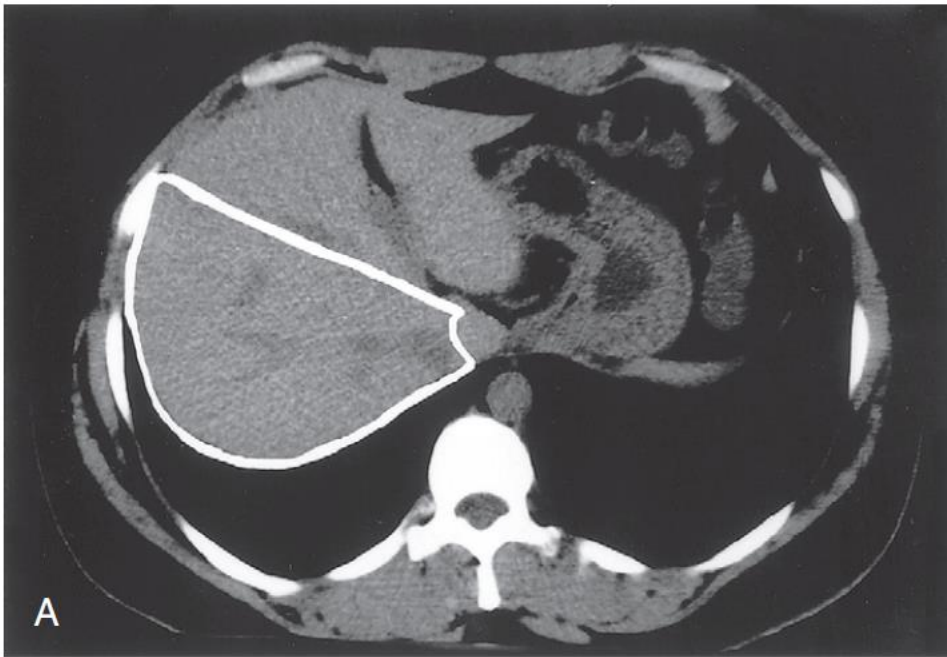
SCAR FORMATION



Labile tissue

injured cells replaced by regeneration **provided** the underlying basement membrane is intact

e.g. Epithelium
BM



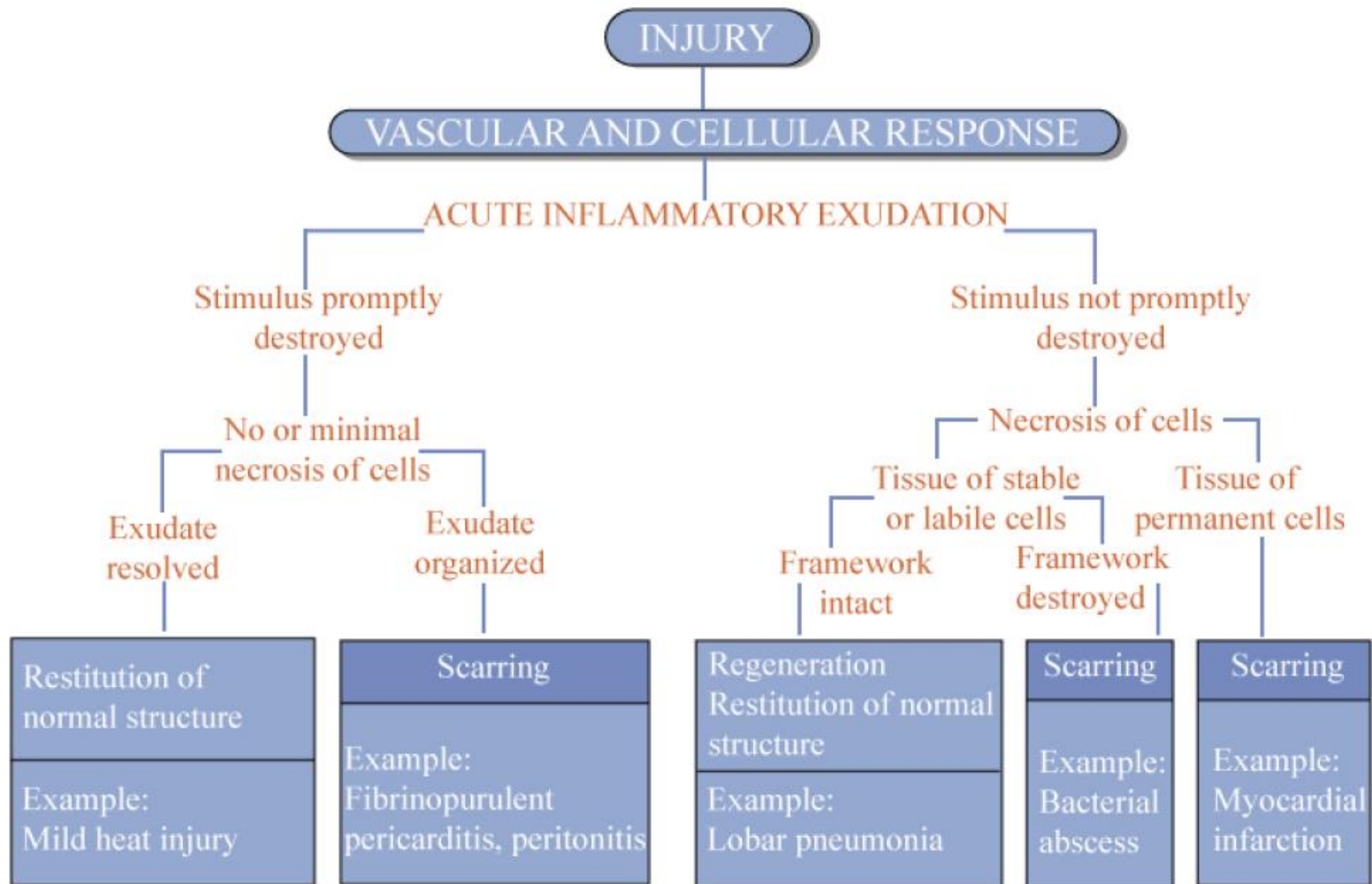
Stable tissue

Limited regeneration can occur in parenchymal organs with stable cell populations

Liver is the exception (resection for donation or due to disease)

Can occur **only** if the residual connective tissue framework is structurally intact

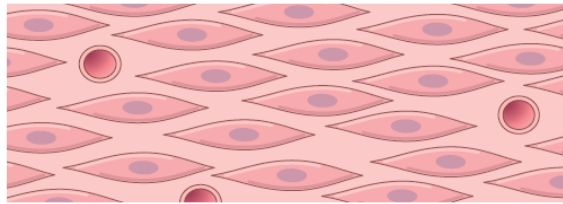
Overview of Tissue Response to Injury





Scar formation

NORMAL

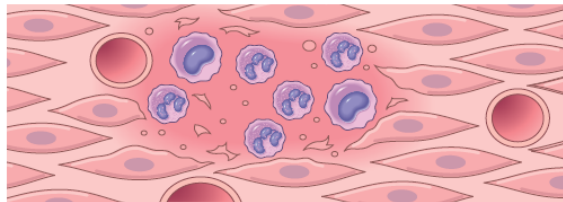


↓ Infection or injury

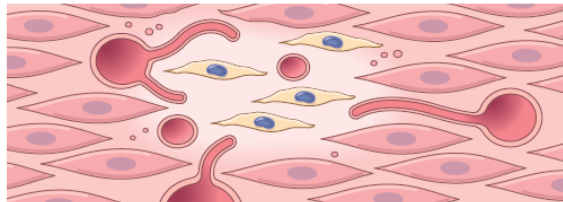
TISSUE
INJURY



INFLAMMATION



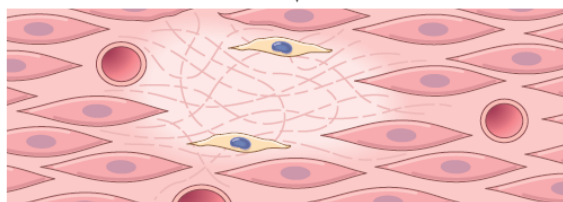
FORMATION OF
GRANULATION
TISSUE



3-5d



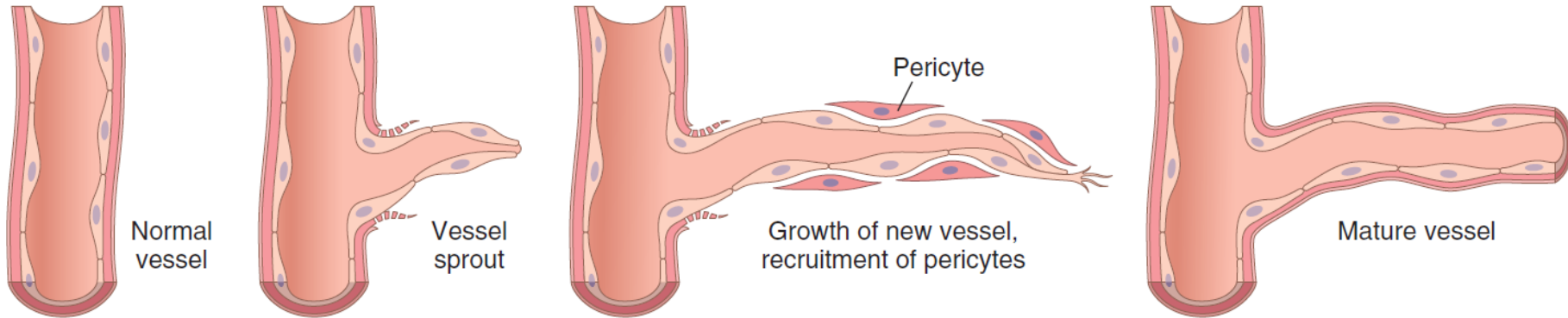
SCAR
FORMATION



Steps

- Angiogenesis
- Migration and proliferation of fibroblasts (24hr)
- Deposition of CT
- Maturation and reorganization

Angiogenesis



NO → Vasodilation
VEGF → increased permeability

Separation of pericytes from the abluminal surface

Migration of endothelial cells

Proliferation of endothelial cells just behind the leading front of migrating cells

Remodeling into capillary tubes

Recruitment of periendothelial cells

Suppression of endothelial proliferation & migration
Deposition of the basement membrane

Angiogenic growth factors (VEGF)

