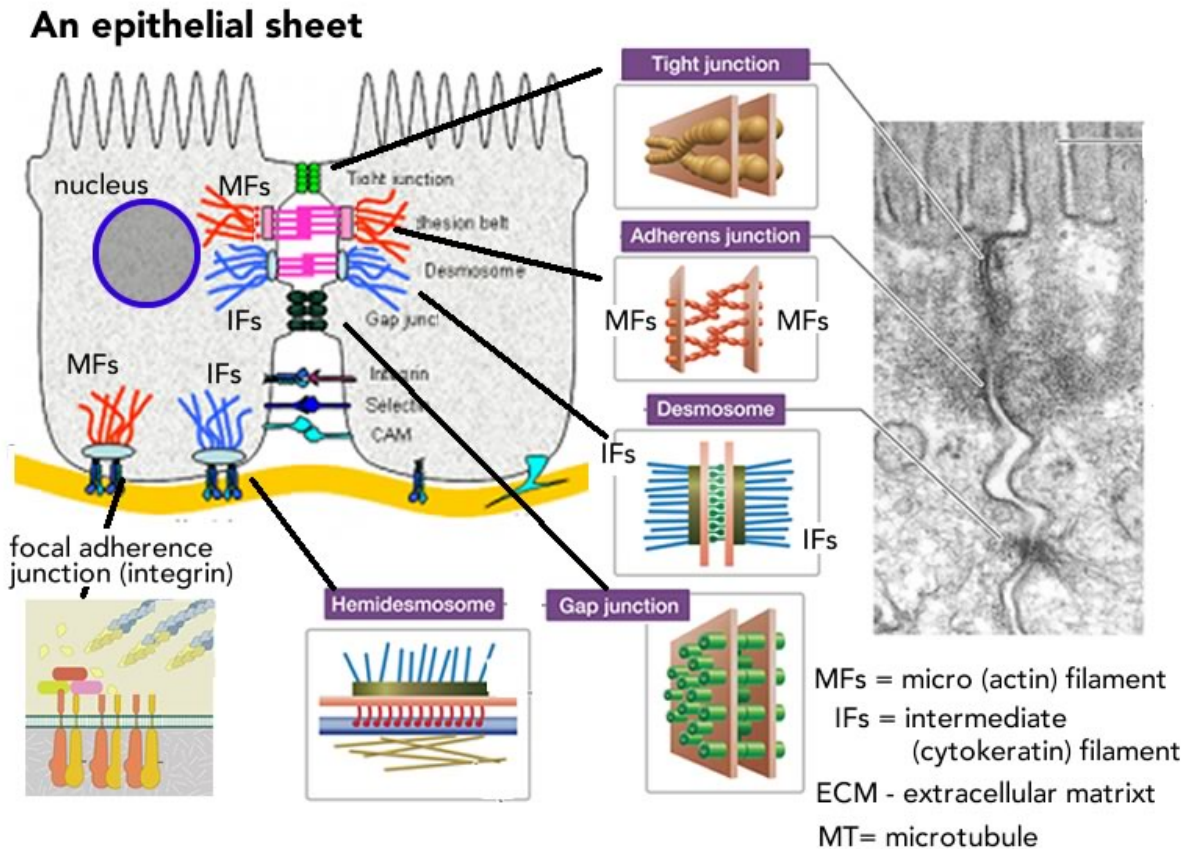


A very short epithelial-mesenchymal cell introduction:

The appearance of the **neural crest** involves the transition of **epithelial cells** (that is, cells in a sheet, bounded on one side by a basal (extracellular) lamina and the other by a fluid-filled lumen or air) to **mesenchymal cells** (cells within an extracellular matrix), a process known as an Epithelial-Mesenchymal Transition (EMT).

EMT processes are associated with epithelial-derived cancer (carcinoma). The process of metastasis involves EMT and leads to mesenchymal-like cells that migrate away from the initial tumor site. They can then invade and colonize many sites within the body.

To give you a visual, here are some of the cellular structures that are present in epithelial cells and have to be disassembled during EMT, and a diagram of mesenchymal cells, which migration through extracellular matrix (loose connective tissue found between cells).



Adherens junctions are based on cadherins, desmosomes on desmosomal cadherins, gap junctions on connexins, tight junctions on claudins/occludins, and focal adherence junctions on integrins.

A mesenchymal cell migrating through ECM

A MF/MT based process

