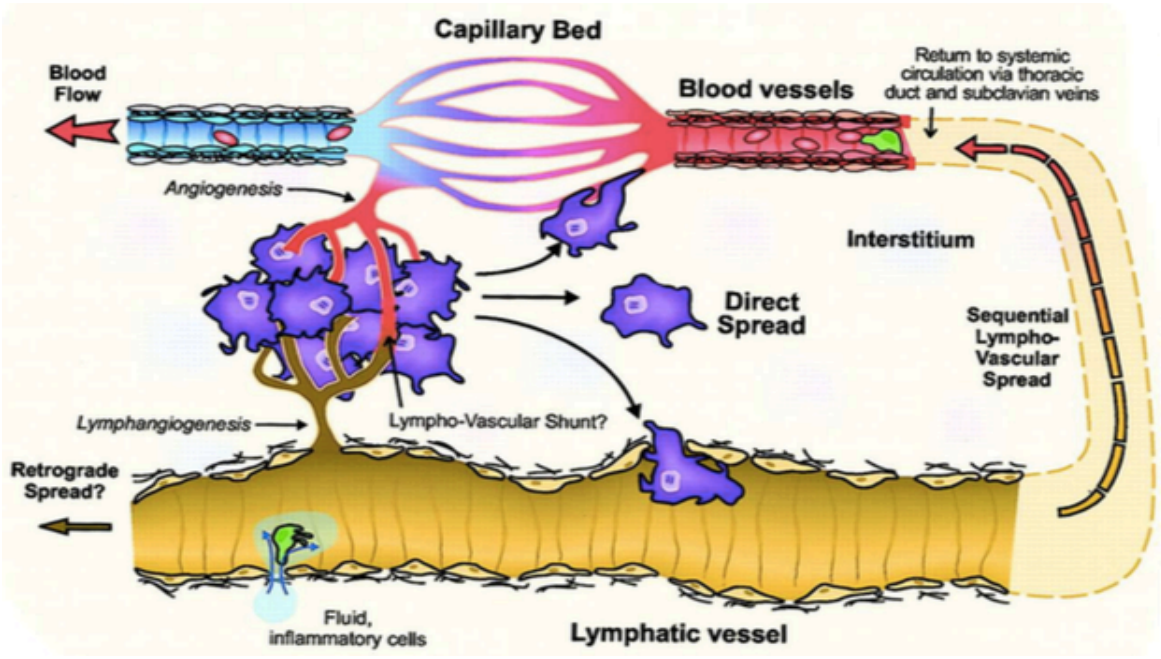
- Lymphatic endothelial cells respond to different angiogenic factors than blood vascular endothelial cells.



12. **Overall:** both the lymphatics and blood vessel vasculature can be used to aid metastasise.

Angiogenesis at the Molecular Level:

- **Step 1:** tumours release soluble factors that **activate** endothelial cells to start sprouting.
    1. Pro-angiogenic factors include VEGF (A-E), which is the first to be characterised and most talked about in cancer.
    2. As the cancer progresses, it acquires alternate ways to promote angiogenesis, such as VEGF-D, growth factors, TGF-beta, which all help to facilitate angiogenesis.
    3. The tumours become better at **inducing and maintaining angiogenesis** as the it progresses.
    4. These factors bind to receptors on endothelial cells to activate them, and in turn, the endothelial cells upregulate the expression of the receptors.

    5. **Platelet derived growth factor (PDGF)** is made by endothelial cells and is a key player in pericyte recruitment. This is the final step in angiogenesis because these cells function to stabilise the blood vasculature.