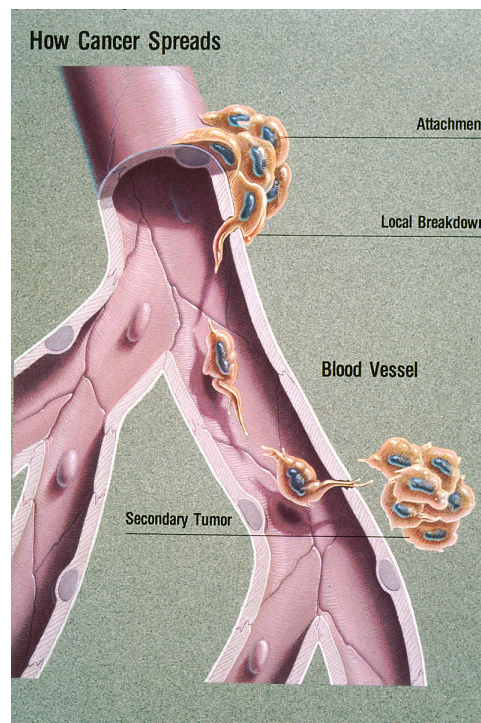


## CONCEPT: METASTASIS

- **Metastasis** describes the ability of cancer cells to enter the bloodstream and travel to distant parts of the body
  - Very few cells \_\_\_\_\_ traveling through the bloodstream
    - First, the cells travel to the lymph nodes and then eventually travel to more distant tissues
  - *Rho* GTPase is important for metastasis, but no one is sure what exactly it does
  - The **tumor microenvironment** describes the environmental components the tumor lives in
    - The environment influences growth, invasion into nearby tissues, and metastasis
    - Also supports **angiogenesis** which is the growth of blood vessels
    - Tumors without a blood supply will die due to a lack of oxygen and nutrients

## EXAMPLE:



### PRACTICE:

1. True or False: Many cells do not survive traveling through the blood stream.
  - a. True
  - b. False
2. Angiogenesis does what for cancer cells?
  - a. Stimulates the production of more growth factors
  - b. Provides a blood supply to the tumor cells
  - c. Blocks apoptosis
  - d. Stimulates an increased rate of DNA replication