

CONCEPT: CANCER TREATMENTS

- There are many different types of cancer treatments

Therapy type	Function
Traditional Therapies	
Surgery	Remove the tumor
Radiation	Kill tumor by damaging DNA
Chemotherapy	Kill tumor by damaging DNA
Immunotherapy	
Passive	Uses antibodies against tumors to kill them
Active	Stimulates patients own immune system to kill the tumor
Anti-angiogenic	Destroys blood vessels that support tumor growth
Molecular targeting	Uses small molecules to target specific cancer causing genes

- Cancer cells can develop *resistance* against the _____
 - **Multidrug resistance** is when cancer cells exposed to one treatment, develop resistance to multiple treatments
 - *Mdr1* gene, which is an ABC Transporter, becomes amplified
 - The Mdr1 protein transports cancer killing chemicals out of the cell – making them insensitive

EXAMPLE:

PRACTICE:

1. Which of the following therapies targets cancer cells by introducing antibodies into the tumor?
 - a. Chemotherapy
 - b. Surgery
 - c. Passive immunotherapy
 - d. Anti-angiogenic drugs
2. Which of the following therapies targets cancer cells by destroying blood vessels that support tumor growth?
 - a. Chemotherapy
 - b. Surgery
 - c. Passive immunotherapy
 - d. Anti-angiogenic drugs