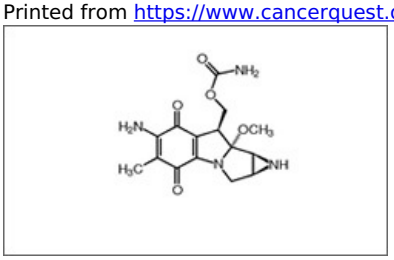
Mitomycin C



Brand name: Mutamycin®
IUPAC: 6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methyl-azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione carbamate (ester)
FDA approval: Yes
Manufacturer Link
Usage:

Mitomycin C (Mutamycin®) is an alkylating agent used in treating several cancers including, gastric cancer, anal and colon cancer, breast cancer, non-small cell lung cancer, head and neck cancer, small bladder papillomas, pancreatic cancer, cervical cancer. Mitomycin C is administered intravenously.1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Mechanism:

Mitomycin C is an alkylating agent that binds to DNA, causing cross-linking and inhibition of DNA synthesis and function. Mitomycin C also works by targeting DNA-dependent RNA polymerase.1

Stick | Sphere | Cross | Rotate

The diagram above is the 3D molecular structure of Mitomycin C.

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Side effects:

Common side effects associated with Mitomycin C include: Myelosuppression, nausea and vomiting, mucositis and fatigue.1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Contraindications:

Birth defects are a possibility, therefore patients should not become pregnant or father a child during treatment with mitomycin. Also, patients planning to have children in the future should consult with their doctor before beginning treatment as this drug may cause sterility. Doctors should be informed of pre-existing conditions such as chickenpox, heart disease or heart failure, gout, shingles, kidney stones or liver disease as these health conditions could increase the incidence and severity of side effects. Patients receiving this treatment should also avoid immunizations due to treatment-induced immunosuppression.1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.