

[Open Peer Review on Qeios](#)

Banoxantrone

National Cancer Institute

Source

National Cancer Institute. *Banoxantrone*. NCI Thesaurus. Code C79528.

A bioreductive, alkylaminoanthraquinone prodrug with antineoplastic activity. Under hypoxic conditions, often seen in solid tumors, banoxantrone (AQ4N) is converted and activated by cytochrome P450 enzymes, which are upregulated in certain tumors, to the cytotoxic DNA-binding agent AQ4. Banoxantrone intercalates into and crosslinks DNA, and inhibits topoisomerase II. This results in an inhibition of DNA replication and repair in tumor cells. Combined with conventional therapeutic agents, both oxygenic and hypoxic regions of tumors can be targeted.