

[Open Peer Review on Qeios](#)

Ancitabine

National Cancer Institute

Source

National Cancer Institute. *Ancitabine*. NCI Thesaurus. Code C80636.

A cytarabine congener prodrug with antineoplastic activity. Upon administration, ancitabine is slowly hydrolyzed into cytarabine, which is converted to the active triphosphate form and competes with deoxycytidine triphosphate for incorporation into DNA. Because the arabinose sugar sterically hinders the rotation of the molecule within DNA, DNA replication ceases, specifically during the S phase of the cell cycle. This agent also inhibits DNA and RNA polymerases, resulting in a decrease in cell growth. Compared to cytarabine, a more prolonged, consistent cytarabine-mediated therapeutic effect may be achieved with ancitabine because of the slow hydrolytic conversion of ancitabine to cytarabine.