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# Ranolazine

National Cancer Institute

## Source

National Cancer Institute. *Ranolazine*. NCI Thesaurus. Code C66507.

An orally available, piperazine derivative with anti-anginal and potential antineoplastic activities. Ranolazine's mechanism of action for its anti-ischemic effects has yet to be fully elucidated but may involve the alteration of the trans-cellular late sodium current in the ischemic myocyte. By preventing the rise of intracellular sodium levels, ranolazine may affect the transport activity of sodium-dependent calcium channels and prevent the calcium overload during myocardial ischemia, thereby preventing cellular injury. Ranolazine's potential antineoplastic effect may depend on its inhibitory effect on fatty acid oxidation, which may sensitize tumor cells to apoptosis and decrease tumor cell proliferation; fatty acid oxidation provides energy and promotes tumor cell proliferation and survival.