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DHA-Paclitaxel

National Cancer Institute

Source

National Cancer Institute. *DHA-Paclitaxel*. NCI Thesaurus. Code C2649.

A prodrug comprised of the naturally occurring omega-3 fatty acid docosahexaenoic acid (DHA) covalently conjugated to the anti-microtubule agent paclitaxel. Because tumor cells take up DHA, DHA-paclitaxel is delivered directly to tumor tissue, where the paclitaxel moiety binds to tubulin and inhibits the disassembly of microtubules, thereby resulting in the inhibition of cell division. Paclitaxel also induces apoptosis by binding to and blocking the function of the apoptosis inhibitor protein Bcl-2 (B-cell Leukemia 2). DHA-paclitaxel exhibits improved pharmacokinetic and toxicity profiles when compared to conventional paclitaxel and has demonstrated antineoplastic activity in animal models of cancer. (NCI04)