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# Carmustine Sustained-Release Implant Wafer

National Cancer Institute

## Source

National Cancer Institute. *Carmustine Sustained-Release Implant Wafer*. NCI Thesaurus. Code C102847.

A sustained release (SR) implant wafer containing the lipophilic nitrosourea carmustine (BCNU) with antineoplastic activity. Upon intracranial administration of the implant wafer and subsequent release of BCNU from the wafer, this agent alkylates and cross-links DNA during all phases of the cell cycle, resulting in the disruption of DNA function, cell cycle arrest, and apoptosis. This wafer contains the biodegradable copolymer PLGA (poly(lactide-co-glycolide) as the major drug delivery vehicle which is slowly degraded into water and carbon dioxide thereby continuously releasing BCNU over approximately 3-4 weeks. Compared to systemic administration of BCNU alone, this local SR formulation is able to maintain higher drug concentrations locally over a longer period of time while minimizing exposure to other tissues.