

Ventricular access device

General information

An indwelling [ventricular catheter](#) connected to a [reservoir](#) that is positioned under the [scalp](#) for the purpose of chronic access to the [intrathecal](#) space (usually the [ventricular system](#)), or sometimes other intracranial compartments such as [tumor cysts](#). Sometimes referred to generically as an [Ommaya reservoir](#); however, this is actually a trade name.

Indications

1. administration of intrathecal (IT) [antineoplastic chemotherapy](#):

Patients with [leptomeningeal carcinomatosis](#) face a particularly grim prognosis. Current treatment consists of [intrathecal](#) delivery of [methotrexate](#) (MTX) or [cytosine arabinoside](#) (Ara-C) via [ventricular access device](#) ([Ommaya reservoir](#)) or [lumbar puncture](#). Yet despite these interventions, the median survival after diagnosis is only 4-7 months ¹⁾.

a) For CNS [lymphoma](#) or [leukemia](#)

b) IT chemotherapy is often used for the following even in the absence of CNS involvement because of the high relapse rate in the CNS: acute lymphoblastic leukemia, lymphoblastic lymphoma, Burkitt's lymphoma

2. administration of intrathecal antibiotic for chronic [meningitis](#)

3. chronic removal of CSF from infants with [intraventricular hemorrhage](#)

4. for fluid aspiration from a chronic [tumor cyst](#) that is resistant to therapy (radiation or surgery)

¹⁾

Chen TC, Napolitano GR, Adell F, Schönthal AH, Shachar Y. Development of the Metronomic Biofeedback Pump for leptomeningeal carcinomatosis: technical note. J Neurosurg. 2015 Aug;123(2):362-72. doi: 10.3171/2014.10.JNS14343. Epub 2015 May 8. PubMed PMID: 25955873.

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