Cancer in the central nervous system can arise from a primary brain tumor and metastasize to the brain or to the leptomeninges, leading to leptomeningeal metastasis (LM). LM also is called leptomeningeal carcinomatosis and carcinomatous meningitis. When LM occurs, signs and symptoms include headache, nausea, vomiting, lumbar back pain, and stiff or painful neck; LM also may lead to mental disturbances and seizures. Nursing care of patients with LM requires an understanding of neurologic anatomy and physiology, along with associated treatments and complications. Treatment of LM may involve intrathecal or, more likely, intraventricular chemotherapy. Very little has been written about appropriate care of patients with LM. The purpose of this article is to review the literature, summarize clinical care recommendations, and construct evidence-based guidelines for the administration of intraventricular chemotherapy and the care and monitoring of patients with LM.