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| **Content Outline Specification** | **Slide(s)** |
| **Epidemiology/predisposing factors/genetics** |  |
| Know the cytogenetic and molecular genetic abnormalities associated with brain tumors | See individual tumor |
| Recognize the association between brain tumors and heritable syndromes (eg, neurofibromatosis, tuberous sclerosis) | 106 |
| Know the association between pineoblastoma and retinoblastoma | 108 |
| **Pathology** |  |
| Recognize the pathologic subtypes of brain tumors such as low-grade glioma, high-grade glioma, medulloblastoma, ependymoma, atypical teratoid/rhabdoid tumor, choroid plexus carcinoma, and CNS germ cell tumor | 8-20 |
| Recognize the pathologic subtypes of brain tumors relative to primary tumor site and pattern of spread | 21-28; 104 |
| Recognize the relationship between histologic grade of gliomas and prognosis | 10, 82, 90 |
| **Clinical presentation** |  |
| Recognize the clinical presentation of brain tumors by anatomic site | 37 |
| Know the clinical and laboratory manifestations of different central nervous system tumors | See individual tumor |
| Know the clinical and laboratory features of medulloblastoma | 48-51 |
| Know the clinical and laboratory features of cerebellar astrocytoma | 75-76; 87 |
| Know the clinical and laboratory features of brain stem glioma | 68, 87 |
| Know the clinical and laboratory features of pineal tumors | 56 |
| Know the clinical and laboratory features of ependymoma | 59-61 |
| Know the clinical and laboratory features of primitive neuroectodermal tumors | 56 |
| Know the clinical and laboratory features of optic pathway gliomas | 83 |
| Recognize the relationship between age and anatomic site in the clinical presentation of brain tumors | 30 |
| Know the clinical and laboratory features of hypothalamic tumors | 37,83 |
| Know the clinical and laboratory features of intramedullary spinal cord tumors | 103 |
| **Diagnosis and staging** |  |
| Utilize appropriate imaging modalities to determine the extent and metastatic spread of brain tumors | 40 |
| Know which central nervous system tumors are associated with spinal cord metastases | 104 |
| Know the appropriate imaging, CSF, and other laboratory studies to use for staging CNS tumors | See individual tumor |
| Know the patterns of metastasis and spread characteristic of CNS tumors | 104 |
| **Treatment** |  |
| Know the role of surgery in the treatment of brain tumors | 41-42 |
| Recognize that surgery alone is curative for cerebellar astrocytoma | 80, 84 |
| Know the role of irradiation in the treatment of brain tumors | 41, 43 |
| Know the role of chemotherapy in the treatment of brain tumors | 41, 44-45 |
| Monitor the response to treatment of brain tumors using clinical modalities | Do an examination |
| Monitor the response to treatment of brain tumors using imaging modalities | Get an MRI |
| Monitor the response to treatment of brain tumors using biochemical markers | 100 |
| Know the principles of management for patients with medulloblastoma | 50-54 |
| Know the principles of management for patients with low grade astrocytoma | 80-81 |
| Know the principles of management for patients with brain stem glioma | 71 |
| Know the principles of management for patients with pineal tumors | 57 |
| Know the principles of management for patients with ependymoma | 61-63 |
| Know the principles of management for patients with primitive neuroectodermal tumors | 57 |
| Know the principles of management for patients with high grade gliomas (anaplastic astrocytoma and glioblastoma multiforme) | 87-89 |
| Know the principles of management of patients with central nervous system germ cell tumors | 95, 100 |
| **Prognosis** |  |
| Know the prognostic features (eg, stage and histology), and their associated prognoses, of brain tumors | See individual tumor |
| Know the natural history of medulloblastoma | 55 |
| Know the natural history of low grade astrocytoma | 83 |
| Know the natural history of brain stem glioma | 72 |
| Know the natural history of pineal cell tumors | 56 |
| Know the natural history of ependymoma | 64 |
| Know the natural history of central nervous system primitive neuroectodermal tumors | 56 |
| Identify the prognostic factors in patients with medulloblastoma | 50-51 |
| Identify the prognostic factors in patients with astrocytoma | 82 |
| Identify the prognostic factors in patients with brain stem glioma | 73 |
| Identify the prognostic factors in patients with pineal cell tumors | 56 |
| Identify the prognostic factors in patients with ependymoma | 61, 64 |
| Identify the prognostic factors in patients with primitive neuroectodermal tumors | 56 |
| Know the natural history of high grade gliomas | 90 |
| Identify the prognostic factors in patients with central nervous system germ cell tumors | 96, 101 |
| **Complications/late effects** |  |
| Know the complications and late effects of brain tumors | 109-110 |
| Know the late effects of brain tumors and their treatment in patients of various ages | 109-110 |
| Know the secondary malignancies associated with treatment of brain tumors | 109 |
| Know the potential neurologic sequelae of brain tumors and their treatment | 109 |
| Know the potential endocrine sequelae of brain tumors and their treatment | 110 |
| Know the potential intellectual sequelae of brain tumors and their treatment | 109-110 |
| Know the complications and late effects of surgery performed in the treatment of brain tumors | 109 |
| Know the complications and late effects of irradiation in the treatment of brain tumors | 109 |
| Know the complications and late effects of chemotherapy in the treatment of brain tumors, eg, secondary malignancies | 110 |