



20. By definition, a giant aneurysm has a maximal diameter larger than \_\_\_\_\_ cm.  
 A 2.5                      B 4                      C 1.5                      D 3
21. The appearance of blood products on MR imaging is dependent, most importantly, the \_\_\_\_\_ at the time of imaging.  
 A structure of hemoglobin      B plasma content      C red cell content      D white cell content
22. The most common cause of an extra-axial neoplasm in adults is meningioma.  
 A True                      B False
23. Amyloid angiopathy is usually seen in patients older than \_\_\_\_\_ years of age, and is a diagnosis of exclusion.  
 A 30                      B 40                      C 50                      D 60
24. Approximately \_\_\_\_\_% of patients with nontraumatic subarachnoid hemorrhage will have negative angiograms.  
 A 5 to 7                      B 10 to 15                      C 18 to 23                      D 30
25. \_\_\_\_\_ imaging is the most sensitive imaging modality for the detection and evaluation of diffuse axonal injury.  
 A CT                      B MR                      C US                      D Nuclear medicine
26. Most GBMs (glioblastoma \_\_\_\_\_) enhance and usually demonstrate heterogeneity because of the presence of necrosis or hemorrhage.  
 A melanosis                      B multiforme                      C myositis                      D methemoglobin
27. \_\_\_\_\_ lobe epilepsy is the most common epilepsy syndrome in adults.  
 A Parietal                      B Occipital                      C Frontal                      D Temporal
28. The typical imaging appearance of a germinoma on unenhanced CT is:  
 A a hypodense mass                      B almost undetectable                      C a hyperdense mass                      D a heterogenous mass
29. Herpes simplex virus \_\_\_\_\_ is responsible for neonatal infection.  
 A type I                      B type II                      C (cold sore herpes)                      D (oral herpes)
30. Approximately \_\_\_\_\_% of patients with tuberculosis go on to have CNS disease.  
 A 2                      B 5 to 10                      C 23                      D 29 to 34
31. The most common neoplasm associated with purely dural metastases is \_\_\_\_\_ carcinoma.  
 A breast                      B pancreas                      C lung                      D colon
32. \_\_\_\_\_ MR imaging is particularly useful in distinguishing intrinsic aqueductal abnormalities from extrinsic mass compression.  
 A Coronal                      B Sagittal                      C Axial                      D Angiographic
33. In patients with their first episode of optic neuritis, up to \_\_\_\_\_% have asymptomatic cerebral white matter lesions on brain MR study.  
 A 24                      B 36                      C 51                      D 65
34. More than \_\_\_\_\_% of developmental venous malformations are asymptomatic; however, rarely, these lesions may hemorrhage.  
 A 75                      B 62                      C 99                      D 87
35. Approximately \_\_\_\_\_% of patients with pyogenic bacterial meningitis will have complications necessitating neurosurgical intervention.  
 A 20                      B 34                      C 2                      D 7
36. The more common differential diagnosis of an infundibular lesion in adults includes granulomatous disease and:  
 A metastasis                      B lymphoma                      C hypothalamic glioma                      D viral infection
37. Dysplastic gangliocytomas present on CT as a(n) \_\_\_\_\_ mass.  
 A elongated                      B mildly hyperdense                      C mildly hypodense                      D strongly hyperdense
38. Typically presenting in the \_\_\_\_\_ decades of life, sarcoidosis is slightly more common in women than in men.  
 A 1<sup>st</sup> and 2<sup>nd</sup>                      B 3<sup>rd</sup> and 4<sup>th</sup>                      C 5<sup>th</sup> and 6<sup>th</sup>                      D 7<sup>th</sup> and 8<sup>th</sup>
39. The presence of additional lesions separate from the mass points more toward a demyelinating disease versus a glioma.  
 A True                      B False

CASE: 34

CASE: 35

CASE: 36

CASE: 39

CASE: 40

CASE: 41

CASE: 42

CASE: 44

CASE: 46

CASE: 48

CASE: 50

CASE: 51

CASE: 52

CASE: 54

CASE: 56

CASE: 59

CASE: 60

CASE: 61

CASE: 62

CASE: 64

- CASE: 66**
40. \_\_\_\_\_ are circumscribed lesions that follow the signal characteristics of CSF on all MR pulse sequences (T1W, FLAIR, T2W).  
 A Arachnoid cysts      B Cerebral infarcts      C Alzheimer's disease lesions      D Parkinson's disease lesions
- CASE: 67**
41. Regarding cavernous malformations, approximately \_\_\_\_\_% of patients have multiple lesions.  
 A 5      B 12      C 18      D 25
- CASE: 69**
42. \_\_\_\_\_ cysts are benign masses typically located in the superior aspect of the anterior 3<sup>rd</sup> ventricle between the columns of the fornices.  
 A Pineal      B Epidermoid      C Colloid      D Rathke's cleft
- CASE: 71**
43. Toxoplasma can be transmitted through raw meat, milk, blood products, and cat feces, and by in utero exposure.  
 A True      B False
- CASE: 72**
44. A combination of imaging modalities, including \_\_\_\_\_, CT, and MR, can be used to assess CSF leaks and meningoencephaloceles.  
 A US      B general xray      C PET      D nuclear scintigraphy
- CASE: 75**
45. White matter tractography based on diffusion tensor imaging is a(n) \_\_\_\_\_ that can depict white matter tracts in the brain in vivo.  
 A MR technique      B CT technique      C US technique      D nuclear medicine
- CASE: 76**
46. Intracranial aneurysms are multiple in approximately \_\_\_\_\_% of cases.  
 A 10      B 20      C 30      D 40
- CASE: 77**
47. When neural elements make up the majority of a ganglioglioma, the neoplasm is referred to as a:  
 A gangleuron      B cerebroganglion      C ganglioneuroma      D neuroganglion
- CASE: 78**
48. In \_\_\_\_\_, there is a malformation in the normal process of bone remodeling.  
 A osteitis fibrosa      B Klippel-Feil syndrome      C Paget's disease      D hypophosphatasia
- CASE: 81**
49. Regarding lateral medullary syndrome, symptoms may include ataxia, cranial nerve \_\_\_\_\_ neuropathies, nystagmus, and vertigo.  
 A III and IV      B V and VI      C IX and X      D I and II
- CASE: 82**
50. Wallerian degeneration is a secondary manifestation of \_\_\_\_\_ injury from a spectrum of causes.  
 A neck      B brain      C spinal cord      D back
- CASE: 84**
51. Thyroid ophthalmopathy is more common in women by a ratio of \_\_\_\_\_ and is frequently asymptomatic.  
 A 2:1      B 3:1      C 4:1      D 5:1
- CASE: 86**
52. \_\_\_\_\_, arachnoid cysts are isodense to CSF on CT.  
 A Seldom      B Usually      C In every case      D In about 2% of cases
- CASE: 88**
53. Only in very rare instances, patients with multiple cavernomas have lesions too numerous to count.  
 A True      B False
- CASE: 90**
54. Subependymal nodules are seen in essentially all patients with tuberous sclerosis, and more than \_\_\_\_\_% are calcified.  
 A 75      B 24      C 87      D 10
- CASE: 91**
55. Isolated premature closure of the sagittal suture is most common, occurring in more than \_\_\_\_\_% of cases of craniosynostosis.  
 A 50      B 70      C 60      D 80
- CASE: 92**
56. Chiari \_\_\_\_\_ malformation is a congenital anomaly that is usually associated with "beaking" of the tectum.  
 A II      B I      C IV      D III
- CASE: 94**
57. The most common location of calvarial epidermoid cysts is in the \_\_\_\_\_ bone.  
 A frontal      B temporal      C occipital      D parietal
- CASE: 96**
58. Heterotopias appear as masses that are \_\_\_\_\_ to gray matter on all pulse sequences and do not enhance.  
 A hyperintense      B mildly hypointense      C strongly hypointense      D isointense
- CASE: 98**
59. \_\_\_\_\_ hemangioblastomas are benign neoplasms that represent the most common primary infratentorial neoplasm in adults.  
 A Pons      B Spinal      C Cerebellar      D Midbrain

60. Conventional \_\_\_\_\_ is still best for showing the changes of vasculitis in the cerebral arteries.

- A CTA                      B MR                      C catheter angiography

CASE: 100

61. On CT, \_\_\_\_\_% of optic nerve meningiomas have calcification along the nerve sheath.

- A 2                      B 7                      C 20 to 50

D MRA

CASE: 101

62. Up to \_\_\_\_\_% of people have calcification in the pineal gland by adolescence.

- A 17                      B 10                      C 26

D 74 to 80

CASE: 102

63. On CTV (computed tomography \_\_\_\_\_) thrombosis is readily identified as filling defects in the affected venous sinuses.

- A venography                      B visualization                      C vein imaging

D 38

CASE: 104

D ventricle imaging

CASE: 106

64. Approximately \_\_\_\_\_% of pituitary adenomas present as a result of endocrine dysfunction.

- A 25                      B 50                      C 75

D 98

CASE: 108

65. \_\_\_\_\_ is a systemic disorder characterized pathologically by noncaseating granulomas.

- A Systemic scleroderma                      B Rheumatoid arthritis                      C Sarcoidosis

D Diabetes mellitus

CASE: 109

66. NPH (\_\_\_\_\_ pressure hydrocephalus), a form of communicating hydrocephalus, is characterized by normal mean CSF pressure.

- A neuroblastoma                      B necrotic                      C normal

D negative

CASE: 110

67. Intracranial lipomas occur in the suprasellar cistern about \_\_\_\_\_% of the time.

- A 50                      B 25                      C 10

D 15

CASE: 112

68. Saccular aneurysms account for \_\_\_\_\_% of spontaneous subarachnoid hemorrhages.

- A 70 to 80                      B 45                      C 32

D 10 to 14

CASE: 114

69. The typical interval between gadolinium injection for MR imaging and the onset of symptoms of NSF is \_\_\_\_\_ weeks.

- A 1                      B 2 to 8                      C 10

D 12 to 14

CASE: 116

70. \_\_\_\_\_ refers to slow, progressive occlusive disease of the distal intracranial internal carotid arteries and its proximal branches.

- A Thrombosis                      B DVT                      C Moyamoya

D Amyloid angiopathy

CASE: 118

71. In cases of acute sinusitis, an air-fluid level or sinus opacification is present in more than \_\_\_\_\_% of cases.

- A 8                      B 50                      C 18

D 27

CASE: 119

72. Mucocoeles are common in the posterior ethmoid and sphenoid sinuses.

- A True                      B False

CASE: 120

73. Patients with spontaneous intracranial hypotension typically present with \_\_\_\_\_ that are frequently postural in nature.

- A back aches                      B leg aches                      C abdominal aches

D head aches

CASE: 122

74. Fahr disease carries with it neurological manifestations such as athetosis, which is:

- A slow, involuntary movements                      B speaking in nonsensical terms                      C quick, jerky movements

D slow speech

CASE: 123

75. CNS lymphoma is most commonly seen in \_\_\_\_\_ patients.

- A Alzheimer's                      B speech-deficit                      C motor-skill deficit

D immunocompromised

CASE: 124

76. Each year, 1 in \_\_\_\_\_ people is diagnosed with dementia.

- A 5,000                      B 500                      C 50,000

D 50

CASE: 127

77. Regarding acute toxic demyelination, initial imaging shows characteristic signal abnormality in the \_\_\_\_\_ on the FLAIR image.

- A bilateral globus pallidus                      B cerebellum                      C putamen

D basal ganglia

CASE: 128

78. Regarding neurofibromatosis type 1, \_\_\_\_\_ imaging is the best choice for assessing the extent of the tumors.

- A CT                      B US                      C MR

D nuclear medicine

CASE: 130

79. Patients with nonaneurysmal perimesencephalic subarachnoid hemorrhage generally have an excellent prognosis.

- A True                      B False

**CASE: 132**

80. After radiation therapy for nasopharyngeal cancer, radiation necrosis typically shows \_\_\_\_\_ activity on positron emission tomography.  
 A normal tissue      B minor increased      C reduced      D major increased

**CASE: 133**

81. The most common complication of vascular dissection is \_\_\_\_\_ disease that may occur days to weeks after the dissection.  
 A thromboembolic      B vibrio      C hemophilia      D hemochromatosis

**CASE: 134**

82. The term \_\_\_\_\_ pneumocephalus describes the situation in which there are neurologic symptoms due to intracranial air – and pressure.  
 A pressure      B tension      C building      D spontaneous

**CASE: 136**

83. Contrast-enhanced CT is insensitive for the detection of leptomeningeal spread.  
 A True      B False

**CASE: 138**

84. Venous thrombosis is underdiagnosed because of lack of:  
 A adequate testing capabilities      B knowledge for its assessment      C consideration      D adequate funds to do so

**CASE: 140**

85. Cholesterol granulomas, also known as blue-domed or \_\_\_\_\_ cysts, typically arise in the petrous apex.  
 A brown      B azure      C chocolate      D blue mountain

**CASE: 141**

86. Hamartomas are benign nonneoplastic lesions that are likely:  
 A congenital      B viral-related      C bacterial-related      D toxic-induced changes

**CASE: 142**

87. \_\_\_\_\_ carcinoma is the most common neoplasm associated with dural metastases.  
 A Prostate      B Colon      C Lung      D Breast

**CASE: 143**

88. Regarding the presentation of chordomas on CT, calcification is seen in \_\_\_\_\_% of cases.  
 A 14      B 27      C 41      D 50

**CASE: 145**

89. Regarding Lyme disease, Stage II is characterized by:  
 A the bull's-eye skin lesion      B neurologic symptoms      C rheumatologic symptoms      D disseminated infection

**CASE: 148**

90. \_\_\_\_\_ is the most common extracranial pediatric solid tumor and the most common neoplasm in infancy.  
 A Neuroblastoma      B Craniopharyngioma      C Pineal tumor      D Ependymoma

**CASE: 150**

91. In the acute setting of global hypoxic-ischemic injury on MR imaging, T2W hyperintensity may be seen in the:  
 A peripheral cortex      B watershed territories      C midbrain      D temporal lobes only

**CASE: 152**

92. The onset of symptoms in Olivopontocerebellar \_\_\_\_\_ (OPCD) may span several decades.  
 A diffusion      B dysplasia      C degeneration      D demyelination

**CASE: 154**

93. Generally, Huntington's disease is progressive, with death occurring \_\_\_\_\_ years after its onset.  
 A around 5      B 7 to 12      C 15 to 20      D 2

**CASE: 156**

94. Features on conventional MR associated with higher-grade gliomas include necrosis, enhancement, hemorrhage, and marked:  
 A focal hypodensities      B focal hyperdensities      C regional effacement      D mass effect

**CASE: 157**

95. "Tumefactive" multiple sclerosis, high-grade glioma (GBM), and occasionally an abscess can appear similar on imaging.  
 A True      B False

**CASE: 158**

96. Regarding Adrenoleukodystrophy, boys typically present between the ages of:  
 A 2 and 4      B 4 and 10      C 10 and 13      D 13 and 16

**CASE: 161**

97. Cytomegalovirus is present in the latent form in \_\_\_\_\_ of the American population.  
 A 20%      B 29 to 35%      C the majority      D 40 to 44%

**CASE: 162**

98. Cavernous malformations may be present in up to \_\_\_\_\_% of the population.  
 A 5      B 21      C 30      D 50

**CASE: 164**

99. On CT and MRI imaging, neurocytomas typically are heterogeneous masses that contain:  
 A singular cysts      B no cysts      C focal hyperdensities      D multiple cysts

- CASE: 166**
100. The most common location for orbital metastases is the globe, usually involving the region of the choroid and:  
 A sclera B retina C ciliary muscle D fovea
- CASE: 168**
101. On unenhanced T1W images, yellow marrow approaches the intensity of:  
 A muscle B bone C subcutaneous fat D water
- CASE: 170**
102. \_\_\_\_\_ patients are at increased risk for herpes zoster infection.  
 A Female (over 40) B Asian descent C Immunosuppressed D Male (under 30)
- CASE: 171**
103. Regarding Jakob-Creutzfeldt disease, CT may show no abnormality; however, \_\_\_\_\_ is the next most common presentation.  
 A sulcal effacement B unexplained mass effect C acute hemorrhage D atrophy
- CASE: 172**
104. An example of vascular neoplasm that is almost exclusively seen in infancy is:  
 A lymphangioma B capillary hemangioma C cavernous hemangioma D paraganglioma
- CASE: 175**
105. Focal neurologic deficits \_\_\_\_\_ in the course of gliomatosis cerebri.  
 A occur late B occur initially C never occur D occur midpoint
- CASE: 177**
106. CNS tumors are present in about \_\_\_\_\_% of patients with neurofibromatosis type 2.  
 A 25 B 50 C 75 D 100
- CASE: 178**
107. On CT, ocular melanomas are typically \_\_\_\_\_ relative to the vitreous and enhance after contrast.  
 A slightly hypodense B isotense C hyperdense D strongly hypodense
- CASE: 180**
108. Amyotrophic lateral sclerosis is also known as:  
 A Lou Gehrig's disease B Cento's disease C Bondanella's disease D Redman's disease
- CASE: 182**
109. Regarding the presentation of Wilson's disease on MR imaging, the most common finding may be:  
 A atrophy B acute hemorrhage C unexplained mass effect D sulcal effacement
- CASE: 184**
110. The first-line imaging modality in the evaluation of suspected nontraumatic subarachnoid hemorrhage is:  
 A CT with contrast B unenhanced CT C MRA D US
- CASE: 186**
111. Of the dural venous sinuses, DAVMs most commonly involve the sigmoid and \_\_\_\_\_ sinuses.  
 A occipital B straight C transverse D superior sagittal sinus
- CASE: 188**
112. Wernicke encephalopathy is related to thiamine deficiency and is found most commonly in:  
 A diabetic patients B Asian descent patients C hypertensive patients D chronic alcoholism
- CASE: 189**
113. Up to \_\_\_\_\_% of patients with acute subarachnoid hemorrhage die before reaching the hospital.  
 A 3 B 7 C 10 D 15
- CASE: 190**
114. Patients with osmotic demyelination typically have a history of alcoholism and:  
 A chronic viral infections B diabetes C malnourishment D dehydration
- CASE: 192**
115. Approximately \_\_\_\_\_% of patients with brain metastases have isolated lesions on imaging.  
 A 10 to 15 B 30 to 50 C 2 to 4 D 25
- CASE: 194**
116. Rhombencephalosynapsis is an anomaly of the \_\_\_\_\_ that is agenetic or hypoplastic.  
 A cerebellar vermis B cerebellar horizontal fissure C cerebellar posterior lobe D cerebellar primary fissure
- CASE: 195**
117. Before the AIDS epidemic, \_\_\_\_\_ multifocal leukoencephalopathy (PML) was largely seen in an array of immunocompromised patients.  
 A pineal B pituitary C penumbra D progressive
- CASE: 198**
118. Chronic progressive \_\_\_\_\_ ophthalmoplegia (CPEO) is a disorder characterized by slowly progressive paralysis in extraocular muscles.  
 A external B empyema C embolism D epidural
- CASE: 200**
119. The hallmark lesion of von Hippel-Lindau disease is the:  
 A hemangioblastoma B paraganglioma C cavernous hemangioma D lymphangioma
120. In von Hippel-Lindau disease, CNS hemangioblastomas are multiple in at least \_\_\_\_\_% of cases.  
 A 10 B 20 C 30 D 40

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