

CASE: 2

1. A cerebral arteriovenous ——— (AVM) is a vascular nidus made up of a core of entangled vessels fed by one or more enlarged arteries.

- A malformation B meningioma C metastases D myositis

CASE: 4

2. ——— is the most efficient and effective way to assess a penetrating brain injury rapidly.

- A MRI B CT C MRA D General xray

CASE: 6

3. ——— % of epidural hematomas cases are secondary to a direct laceration of the meningeal arteries by an overlying skull fracture.

- A 45 B 58-67 C 70-75 D 80-90

CASE: 8

4. Chiari malformations typically occur during ——— weeks of gestational life and are dorsal induction-neural tube defects.

- A the 12th and 13th B the last 5 C the first 3 to 4 D the 20th and 21st

CASE: 9

5. Elevation and thinning of the corpus callosum is present in more than ———% of cases of hydrocephalus.

- A 75 B 83 C 89 D 96

CASE: 10

6. Pineal cysts are variable in size, and ——— % of cysts identified on MR imaging are larger than 1 cm.

- A 20 B 50 C 70 D 80

CASE: 12

7. ——— are the most common intracranial tumors in children, accounting for up to 50% of such neoplasms.

- A Craniopharyngioma B Brain stem gliomas C Ependymomas D Astrocytomas

CASE: 14

8. A(n) ——— scan is the first imaging study for the emergent evaluation of acute stroke for several reasons.

- A unenhanced head CT B head CT with contrast C MRI head D MRA head

CASE: 16

9. ——— % of meningiomas undergo cystic or fatty degeneration.

- A 25 B 5 to 10 C 35 to 40 D 55

CASE: 18

10. The most common clinical presentation of acute subarachnoid hemorrhage is:

- A dizziness B an intense headache C marked fatigue D some loss of motor skills

CASE: 19

11. Approximately 10% of ischemic strokes are preceded by a ——— ischemic attack (TIA).

- A tertiary B temporary C transient D traumatic

CASE: 20

12. Regarding schwannomas of the intracranial compartment, cranial nerve ——— is most commonly involved.

- A VI B IV C VIII D III

CASE: 22

13. The hyperacute intracerebral hemorrhage is ——— on T2W MR imaging.

- A hypointense B hyperintense C isointense D never detected well

CASE: 24

14. On CT and MR imaging, arachnoid cysts usually follow the density or intensity of CSF, respectively.

- A True B False

15. The majority of retinoblastomas (98%) present before ——— years of age.

- A 2 B 10 C 7 D 3

CASE: 25

16. Subdural hematomas do not spread across the midline because they are confined by the:

- A arachnoid granulation B sagittal sulcus C frontal crest D falx

CASE: 26

17. Lacunar infarcts tend to occur in the upper half of the ———, whereas perivascular spaces occur along the inferior half.

- A hippocampus B caudate C putamen D internal capsule

CASE: 28

18. Approximately ——— % of neurologic developmental delays can be attributed to non-accidental (abuse) trauma:

- A 3 B 5 C 7 D 10

CASE: 30

19. ——— carcinoma is the most common cause of blastic metastases in men.

- A Colon B Pancreas C Prostate D Lung

CASE: 32

20. By definition, a giant aneurysm has a maximal diameter larger than ——— cm.

- A 2.5 B 4 C 1.5 D 3

CASE: 34

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

CASE: 35

22. The most common cause of an extra-axial neoplasm in adults is meningioma.

- A True B False

CASE: 36

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

CASE: 39

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

CASE: 40

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

CASE: 41

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

CASE: 42

27. ——— lobe epilepsy is the most common epilepsy syndrome in adults.

- A Parietal B Occipital C Frontal D Temporal

CASE: 44

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 heterogeneous mass

CASE: 46

29. Herpes simplex virus ——— is responsible for neonatal infection.

- A type I B type II C (cold sore herpes) D (oral herpes)

CASE: 48

30. Approximately ———% of patients with tuberculosis go on to have CNS disease.
A 2 B 5 to 10 C 23 D 29 or 34

CASE: 50

31. The most common neoplasm associated with purely dural metastases is ——— carcinoma.
A breast B pancreas C lung D colon

CASE: 51

32. ——— MR imaging is particularly useful in distinguishing intrinsic aqueductal abnormalities from extrinsic mass compression.
A Coronal B Sagittal C Axial D Angiographic

CASE: 52

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

CASE: 54

34. More than ———% of developmental venous malformations are asymptomatic; however, rarely, these lesions may hemorrhage.
A 75 B 62 C 99 D 87

CASE: 56

35. Approximately ———% of patients with pyogenic bacterial meningitis will have complications necessitating neurosurgical intervention.
A 20 B 34 C 2 D 7

CASE: 59

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

CASE: 60

37. Dysplastic gangliocytoma present on CT as a(n) ——— mass.
A elongated B mildly hyperdense C mildly hypodense D strongly hyperdense

CASE: 61

38. Typically presenting in the ——— decades of life, sarcoidosis is slightly more common in women than in men.
A 1st and 2nd B 3rd and 4th C 5th and 6th D 7th and 8th

CASE: 62

39. The presence of additional lesions separate from the mass points more toward a demyelinating disease versus a glioma.
A True B False

CASE: 64

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: 66

41. Regarding cavernous malformations, approximately ———% of patients have multiple lesions.
A 5 B 12 C 18 D 25

CASE: 67

42. ——— cysts are benign masses typically located in the superior aspect of the anterior 3rd ventricle between the columns of the fornices.
A Pineal B Epidermoid C Colloid D Rathke's cleft

CASE: 69

43. Toxoplasma can be transmitted through raw meat, milk, blood products, and cat feces, and by in utero exposure.
A True B False

CASE: 71

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: 72

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 ganleuron 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

CASE: 100

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

- A CTA B MR C catheter angiography D MRA

CASE: 101

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

- A 2 B 7 C 20 to 50 D 74 to 80

CASE: 102

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

- A 17 B 10 C 26 D 38

CASE: 104

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 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 melitus

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. Mucocelles 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 headaches.

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 isointense 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

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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