

## Cerebral Artery Aneurysm Clipping

- Cerebral aneurysms are most likely the result of \_\_\_\_.**
  - Birth defects
  - Hypertension
  - Hypotension
  - Subarachnoid hemorrhage
- The brain requires a blood flow of \_\_\_\_, making the brain sensitive to even a few seconds of reduced vascular flow.**
  - 600 ml/min
  - 750 ml/hr
  - 750 ml/min
  - 500 cc/min
- Which of the following medications is used to decrease vasospasm?**
  - Heparin
  - Papaverine
  - TPA
  - Thrombin
- The two arteries that give rise to the Circle of Willis are the \_\_\_\_ and the \_\_\_\_.**
  - Vertebral, aorta
  - Vertebral, external carotid
  - Innominate, superior thyroid
  - Vertebral, internal carotid
- The term pterional refers to the \_\_\_\_.**
  - Frontotemporal suture line
  - Transphenoidal approach
  - Junction of the frontal, parietal, temporal, and sphenoid bones
  - Parietotemporal suture line
- Which of the following is an artery that comprises the Circle of Willis?**
  - Superior cerebellar
  - Anterior spinal
  - Anterior communicating
  - Right vertebral artery
- At which junction are aneurysms most common?**
  - ICA-PCA
  - ECA-ICA
  - Right & left vertebral arteries
  - Basilar & superior cerebellar
- What is used to secure the replaced bone flap?**
  - 4-0 braided Neurolon
  - Raney clips
  - Titanium plates and screws
  - Polymethylmethacrylate
- In addition to hemodynamic stress, which additional factors may be responsible for aneurysm formation?**
  - Degenerative osseous lesions
  - Atherosclerosis
  - Head trauma
  - Both B and C
- Which of the following is an approach that can be used to access aneurysms of the Circle of Willis?**
  - Posterotemporal
  - Midline
  - Frontolateral
  - Pterional

## High Grade Astrocytoma in the Adult, Part 1: Biology and Pathology

- Histology is the \_\_\_\_.**
  - Study of History
  - Study of the minute structure, composition, and function of tissues
  - Development of tissues from the undifferentiated germ layer of the embryo
  - Development of a tumor containing histocytes
- Which of the following is one of the gene classes that coordinates the life cycle of a cell?**
  - Tumor suppressor
  - Oncogenes
  - Glial-cell progenitor
  - Fibroblast growth factor
- Types of glial cells include \_\_\_\_.**
  - Oligodendroglial cells (CNS)
  - Ependymal cells (PNS)
  - Astrocytes
  - All of the above
- During which phase of the normal cell cycle does DNA replication occur?**
  - G1
  - S phase
  - Gap two
  - Mitotic phase
- What is mitosis?**
  - Metastasis of cancer cells
  - Glial cell oncogenesis
  - Form of cell division
  - Chromosomal mutation
- What is the most malignant of all types of brain tumors?**
  - Glioblastoma multiforme
  - Anaplastic astrocytoma
  - Schwannoma
  - Meningioma
- In addition to the tumor type and grade, which of the following factors influence the individual prognosis?**
  - Gender
  - Age
  - Vascular proliferation
  - All of the above
- Which phase of mitosis is autocrine growth factors involved?**
  - M
  - S
  - G1
  - G2
- In relation to the normal cell cycle, CDKs are \_\_\_\_.**
  - Oncogenes
  - Growth factors
  - Cyclin dependent kinases
  - Cyclins
- The “go/no-go” point in mitosis \_\_\_\_.**
  - Is also referred to as the restriction point
  - Occurs during the S phase of the cell cycle
  - Occurs during the mitotic (M) phase of the cell cycle
  - Occurs during the G2 phase of the cell cycle

# High Grade Astrocytoma in the Adult, Part 2: Biology, Pathology, Diagnostics and Treatment

- 1. Why do individuals with a tumor in the second grouping have a better prognosis?**
  - a. The tumor has a less aggressive capacity for invading surrounding tissue
  - b. The tumor has a limited growth rate
  - c. The tumor has limited anaplastic progression
  - d. All of the above
- 2. Why are tumors in the second grouping less aggressive than tumors in the first grouping?**
  - a. They are microscopically circumscribed neoplasms
  - b. They are adept at infiltrating surrounding tissue
  - c. Both A & B
  - d. None of the above
- 3. Which of the following risk factors apply to glioblastoma in the adult?**
  - a. Race (Caucasian)
  - b. Gender (Male)
  - c. Age (50s and 60s)
  - d. All of the above
- 4. Meningiomas**
  - a. Rapidly invade brain tissue
  - b. Do not invade brain tissue
  - c. Rapidly invade the spinal cord
  - d. Rapidly invade the pituitary
- 5. Tinel's sign is defined as**
  - a. Ringing in the ears
  - b. Dizziness
  - c. A sensation of tingling
  - d. Nausea
- 6. A nerve conduction study is also called a/an**
  - a. EMG
  - b. CT Scan
  - c. MRI
  - d. Craniotomy
- 7. Which of the following is subcategory of astrocytoma tumors?**
  - a. Ependymoma
  - b. Medulloblastoma
  - c. Gemistocytic
  - d. Choroid plexus
- 8. What is the most common method of administration for a contrast agent?**
  - a. Oral
  - b. Rectal
  - c. Inhalation
  - d. Intravenous
- 9. Which of the following is an advantage of CT scan over MRI?**
  - a. CT is faster than MRI
  - b. CT uses ionizing radiation; MRI does not
  - c. The strong magnet the CT scanner is usually located in the radiology department
  - d. CT uses radio waves; MRI does not
- 10. Glioblastomas represent approximately\_\_\_of all primary brain tumors.**
  - a. 5%
  - b. 10%
  - c. 20%
  - d. 42%

# The Autonomic Nervous System

- The nervous system along with the \_\_\_system controls many bodily activities.**
  - Cardiovascular
  - Respiratory
  - Endocrine
  - Urogenital
- The peripheral nervous system consists of\_\_\_.**
  - 10 pairs of cranial nerves; 28 pairs of spinal nerves
  - 11 pairs of cranial nerves; 29 pairs of spinal nerves
  - 12 pairs of cranial nerves; 31 pairs of spinal nerves
  - 13 pairs of cranial nerves; 32 pairs of cranial nerves
- The autonomic nervous system (ANS) primarily innervates all of the following except\_\_\_.**
  - Glands
  - Skeletal muscle
  - Smooth muscle
  - Cardiac muscle
- The autonomic nervous system (ANS) is activated mainly by centers located in all of the following except\_\_\_.**
  - Cerebellum
  - Hypothalamus
  - Brain stem
  - Spinal cord
- Which of the following is not a response to sympathetic nervous system (SyNs) impulses?**
  - Increase blood pressure
  - Speed up force/rate of heart beat
  - Increase blood sugar concentration
  - Constrict bronchioles
- Both pre-and postganglionic neurons of the parasympathetic nervous system (PaNS) utilize the neurotransmitter\_\_\_.**
  - Epinephrine
  - Norepinephrine
  - Cholinesterase
  - Acetylcholine
- When stimulated by preganglionic sympathetic (thoracicsplanchnic) nerve fibers, the chromaffin cells of the adrenal glands release large quantities of \_\_\_directly into the blood stream.**
  - Acetylcholine
  - Epinephrine
  - Norepinephrine
  - Both B and C
- Which of the following branches of the aorta does not have a collateral ganglion (plexus) located next to it?**
  - Celiac
  - Renal
  - Superior mesenteric
  - Inferior mesenteric
- Preganglionic fibers originate from cell bodies in the \_\_\_gray horn of all the thoracic and first two or three lumbar segments of the spinal cord.**
  - Anterior
  - Lateral
  - Medial
  - Posterior
- \_\_\_receptor sites for acetylcholine (cholinergic) occur at the junction between preganglionic and postganglionic fibers of both the sympathetic and parasympathetic divisions of the ANS.**
  - Nicotinic
  - Muscarinic
  - Adrenergic
  - Oxidase

## General Principles and Instrumentation For Cranial Neurosurgery, Part 1

- Which is another term for the  $\frac{3}{4}$  prone position?
  - Supine
  - Lateral oblique
  - Right lateral recumbent
  - None of the above
- When the patient is in the supine or  $\frac{3}{4}$  position, the CST should be \_\_\_\_.
  - Seated at the head of the table
  - In front of the patient's face
  - Behind the patient's back
  - At the patient's feet
- The \_\_\_\_ is the site of a bony prominence that overlies the torcular and the attachment of the tentorium to the inner table of the skull.
  - Frontozygomatic point
  - Sylvian fissure
  - Nasion
  - Inion
- The \_\_\_\_ separates the motor and sensory areas of the cerebrum.
  - Frontozygomatic point
  - Nasion
  - Sylvian fissure
  - Rolandic fissure
- The \_\_\_\_, the site on the temple, is located 3 cm behind the frontozygomatic point on the Sylvian fissure line.
  - Pterion
  - Inion
  - Orbital rim
  - Tentorium
- \_\_\_\_ interfere with CT or MRI scans, so are only used with aneurysms.
  - Pinion head clamps
  - Rongeurs
  - Metallic clips
  - Bone wax
- \_\_\_\_ is/are used to close small openings in the mastoid air cells and sinuses.
  - Silk suture
  - Pericranial grafts
  - Metallic clips
  - Bone wax
- The greatest accuracy and control of the drill is achieved \_\_\_\_.
  - At high speeds
  - Through constant pressure
  - With low speeds
  - Using minimal irrigation
- Bipolar coagulation will not occur if \_\_\_\_.
  - Tips are too far apart
  - Tips are touching
  - A and b
  - None of the above
- In which areas would unipolar coagulation be hazardous?
  - Brain stem
  - Fourth ventricle
  - Near cranial nerves
  - All of the above

## General Principles and Instrumentation For Cranial Neurosurgery, Part 2

1. **Round-handle forceps with fine serrations inside the tips are called \_\_\_\_.**
  - a. Needle holding forceps
  - b. Dura forceps
  - c. Dressing forceps
  - d. Coagulation forceps
2. **9.5 cm bayonet forceps are used for which tissues?**
  - a. Circle of Willis
  - b. Cerebellopontine angle
  - c. Sellar region
  - d. All of the above
3. **The smallest Penfield dissector is \_\_\_\_ wide.**
  - a. 2 mm
  - b. 3 mm
  - c. 2 cm
  - d. 3 cm
4. **Jewelers forceps are too short for \_\_\_\_.**
  - a. Tying superficial microsuture
  - b. Handling microneedles near the surface
  - c. Deep intracranial operations
  - d. None of the above
5. **Which suction tube would be best for use at the front of the brain stem?**
  - a. 5-French
  - b. 8 cm shaft
  - c. 10 cm shaft
  - d. 13 cm shaft
6. **In suction tube sizes, how many French units equals 1 mm?**
  - a. One
  - b. Two
  - c. Three
  - d. Five
7. **\_\_\_\_are used to elevate the surface of the brain away from the cranial base.**
  - a. Suction tubes
  - b. Elevators
  - c. Bayonets
  - d. Spatulas
8. **\_\_\_\_are used for removing the last shell of bone between a drill surface and neural or vascular structures.**
  - a. Brain spatulas
  - b. Bone currettes
  - c. Cup forceps
  - d. Shell removers
9. **Which allows the surgeon to reach around a corner to grasp tissue or remove tumors?**
  - a. Angled microcup forceps
  - b. 1-2 mm cup forceps
  - c. 3-4 mm corner forceps
  - d. 45 ° angle curets
10. **The retraction system should include\_\_\_\_.**
  - a. Flexible arms
  - b. Clamps and bars
  - c. Tapered and rectangular spatulas
  - d. All of the above

# Creutzfeldt-Jacobs Disease

- 1. Which is the most common form of CJD?**
  - a. Iatrogenic
  - b. Genetic
  - c. Sporadic
  - d. New variant
- 2. In which form of CJD can doctors use tonsil tissue for diagnosis**
  - a. Sporadic
  - b. Genetic
  - c. Iatrogenic
  - d. New variant
- 3. PrP protein has been discovered on \_\_\_\_**
  - a. Nerve cells
  - b. Muscle cells
  - c. White blood cells
  - d. All of the above
- 4. Prions are unlike any other pathogens in that they \_\_\_\_.**
  - a. Contain no DNA or RNA
  - b. Survive routine sterilization and disinfection processes
  - c. Are not contagious in a traditional sense
  - d. All of the above
- 5. FFI and GSS are both \_\_\_\_.**
  - a. Prion diseases
  - b. Inherited forms of CJD
  - c. New variants of CJD
  - d. Iatrogenic
- 6. Beta-sheet prions are \_\_\_\_.**
  - a. Normal PrP
  - b. Infectious PrP
  - c. Helical
  - d. None of the above
- 7. Which form of CJD has the lowest percentage of cases?**
  - a. Iatrogenic
  - b. Sporadic
  - c. Inherited
  - d. vCJD
- 8. According to Rutala & Weber, \_\_\_\_ devices contact mucous membranes and broken skin.**
  - a. Noncritical
  - b. Semicritical
  - c. Critical
  - d. High risk
- 9. According to the CDC, CJD contaminated instruments are considered sterile after \_\_\_\_.**
  - a. Steam autoclaving for 1 hour at 250° F
  - b. Being soaked for 20 minutes in 5,000 ppm hypochlorite
  - c. Using normal sterilization methods
  - d. All instruments must be incinerated
- 10. Which type of human tissue is NOT considered high risk?**
  - a. Brain
  - b. Heart
  - c. Eye
  - d. Spinal cord

# Glioblastoma Multiforme: From Biology to Treatment

- 1. What percentage does glioblastoma multiforme account for in all primary intracranial tumors?**
  - a. 30%
  - b. 40%
  - c. 75%
  - d. 60%
- 2. Which is characteristic of glioblastoma multiforme?**
  - a. Arises from astrocyte cells
  - b. Grey, white, yellow, red, or brown appearance
  - c. Enlarged and irregular cell nuclei
  - d. All of the above
- 3. Which of the following is NOT a symptom of increased intracranial pressure?**
  - a. Nausea
  - b. Headache
  - c. Optic papilla
  - d. Papilledema
- 4. A growth in the \_\_\_ of the brain would produce psychomotor seizures.**
  - a. Temporal lobe
  - b. Cerebral lobe
  - c. Midline
  - d. Frontal lobe
- 5. How long is the prognosis in a patient with untreated glioblastoma multiforme?**
  - a. 12 weeks
  - b. 30 days
  - c. 1-2 years
  - d. 18 weeks
- 6. Glioblastoma most commonly arises from white matter of the \_\_\_?**
  - a. Cerebral hemispheres
  - b. Pons
  - c. Midbrain
  - d. Vermis
- 7. In what age range does GBM most commonly occur?**
  - a. Under 30 years old
  - b. 30-40 years old
  - c. 40-50 years old
  - d. 50-60 years old
- 8. Which type of treatment is affected by the bloodbrain barrier?**
  - a. Gamma Knife
  - b. Ultrasonic aspiration
  - c. Chemotherapy
  - d. Stereotactic surgery
- 9. Polifeprosan 20 with carmustine is what type of drug?**
  - a. Antibiotic
  - b. Diuretic
  - c. Chemotherapeutic
  - d. Steroid
- 10. Approximately how many cases of glioblastoma multiforme are diagnosed annually?**
  - a. 20,000
  - b. 5,000
  - c. 7,500
  - d. 12,000



# Microvascular Decompression For Control of Trigeminal Neuralgia

- 1. Which is the trigeminal nerve?**
  - a. IV
  - b. V
  - c. VI
  - d. X
- 2. Who created a nondestructive technique to decompress the trigeminal nerve?**
  - a. Andre Douloureux
  - b. Walter Dandy
  - c. Peter Janetta
  - d. Antonio Valsalva
- 3. Which is mismatched?**
  - a. V : eyes, upper eyelids and forehead
  - b. V : cheeks, lower eyelids, nostrils, upper lips, gums
  - c. V : jaw, lower lip, gums, chewing muscles
  - d. None are mismatched
- 4. The most common form of treatment for TN is:**
  - a. Medication
  - b. Open surgery
  - c. Ablative procedures
  - d. Endoscopic surgery
- 5. Which is not a symptom of TN?**
  - a. Brief, lancinating pain
  - b. Loss of sensation in the facial nerve
  - c. Decreased corneal reflex
  - d. Decreased estrogen production
- 6. TN causes \_\_, making the patient susceptible to increased pain sensations.**
  - a. Pulsation of the vessel
  - b. Demyelination of the axons
  - c. Transmission of facial sensations
  - d. None of the above
- 7. Which drug used to treat TN has had the best results and fewest side effects?**
  - a. Baclofen
  - b. Carbamazepine
  - c. Gabapentin
  - d. Oxcarbazepine
- 8. When is the Valsalva maneuver performed?**
  - a. When nerve exposure is achieved
  - b. Once the nerve has been decompressed
  - c. Prior to craniectomy
  - d. After cranioplasty
- 9. The most common ablative procedure for TN is:**
  - a. Percutaneous rhizotomy by glycerol injection
  - b. Percutaneous rhizotomy by balloon
  - c. Radio frequency rhizotomy
  - d. Knifeless surgery
- 10. The \_\_\_decompression procedure prevents brain retraction and provides enhanced visualization, lighting and magnification.**
  - a. Endoscopic
  - b. Gamma probe
  - c. CyberKnife®
  - d. Radio frequency rhizotomy

## Anterior Internal Fixation of Type II Odontoid Process Fractures

1. **The most common cause of cervical spine injuries is**
  - a. Diving accidents
  - b. Motor vehicle accidents
  - c. Football accidents
  - d. Climbing mishaps
2. **The most distinguishing feature on C1 is**
  - a. Two lateral masses and two arches
  - b. Large odontoid process
  - c. Absence of a vertebral body
  - d. Cruciate ligament
3. **The most distinguishing feature of C2 is**
  - a. Transverse ligaments
  - b. Apical ligaments
  - c. Alar ligaments
  - d. Dens
4. **The \_\_\_\_ is shaped like a cross and helps stabilize the \_\_\_\_.**
  - a. Cruciate ligament, odontoid process
  - b. Transverse ligament, dorsal aspect
  - c. Alar ligament, medial aspect
  - d. Apical ligament, basion
5. **Type I odontoid fractures usually involve**
  - a. A fracture at the base of the odontoid
  - b. An avulsion of the tip of the odontoid process
  - c. A fracture through the body of C2
  - d. An anterior displacement of the dens
6. **Type II odontoid fractures usually involve**
  - a. A fracture through the body of C2
  - b. Anterior displacements of the dens
  - c. A fracture at the base of the odontoid
  - d. Both b and C
7. **Type II odontoid fractures have several treatment options, including**
  - a. Halo traction
  - b. Posterior C1-2 fusion
  - c. Anterior odontoid screw fixation
  - d. All of the above
8. **The reason for a transverse skin incision at C4-5 is**
  - a. Aligning the drill guide with the process
  - b. Creating a plane to the vertebral bodies
  - c. Exposing the anterior longitudinal ligament
  - d. Retracting the carotid sheath
9. **A \_\_\_\_\_ retractor is used to facilitate exposure of the body of C2.**
  - a. Weitlaner
  - b. Apfelbaum
  - c. Hohmann
  - d. Bennett
10. **Factors to be considered in treatment of odontoid fractures are**
  - a. The level and direction of the fracture line
  - b. The rotation of the fracture fragments
  - c. The presence of any neurological impairment
  - d. All of the above.

# Answers CE CREDIT PKG 3A: 10 CONTINUING EDUCATION CREDITS

AST Member No: \_\_\_\_\_

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## Cerebral Artery Aneurysm Clipping

a	b	c	d	a	b	c	d		
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mark one box next to each number. Only one correct or best answer will be selected for each question.
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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## High Grade Astrocytoma in the Adult, Part 1: Biology and Pathology

a	b	c	d	a	b	c	d		
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## High Grade Astrocytoma in the Adult, Part 2: Biology, Pathology, Diagnostics and Treatment

a	b	c	d	a	b	c	d		
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mark one box next to each number. Only one correct or best answer will be selected for each question.
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3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

## The Autonomic Nervous System

a	b	c	d	a	b	c	d	
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4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
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## General Principles and Instrumentation For Cranial Neurosurgery, Part 1

a	b	c	d	a	b	c	d	
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	Mark one box next to each number. Only one correct or best answer will be selected for each question.
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3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

## General Principles and Instrumentation For Cranial Neurosurgery, Part 2

a	b	c	d	a	b	c	d	
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	Mark one box next to each number. Only one correct or best answer will be selected for each question.
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5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

## Creutzfeldt-Jakob Disease

a	b	c	d	a	b	c	d	
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mark one box next to each number. Only one correct or best answer will be selected for each question.
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

## Glioblastoma Multiforme: From Biology to Treatment

a b c d	a b c d		
1. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Mark one box next to each number. Only one correct or best answer will be selected for each question.
2. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
3. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	9. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
4. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
5. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
6. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			

## Microvascular Decompression For Control of Trigeminal Neuralgia

a b c d	a b c d		
1. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Mark one box next to each number. Only one correct or best answer will be selected for each question.
2. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
3. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	9. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
4. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
5. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
6. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			

## Anterior Internal Fixation of Type II Odontoid Process of Fractures

a b c d	a b c d		
1. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Mark one box next to each number. Only one correct or best answer will be selected for each question.
2. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
3. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	9. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
4. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
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