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Информация о владельце:

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Должность: и.о. декана медико-биологического факультета

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MINISTRY OF SCIENCE AND HIGHER EDUCATION

RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education

NORTH-CAUCASUS FEDERAL UNIVERSITY

APPROVED

Assoc. Prof. Kubanov S.I.

PhD in Medical Sciences

Dean

Faculty of Medicine and Biology

ASSESSMENT TOOLS FUND FOR THE DISCIPLINE

Neurosurgery

- Specialty: 31.05.01 General Medicine
- Mode of training: Full-time
- Year of commencement of studies: 2026
- Delivered in Semester 9

Introduction

1. Intended for carrying out current control of academic performance progress and intermediate attestation in the discipline of « Neurosurgery » for students of the specialty (majoting in) 31.05.01 General Medicine.
2. The ATF is an appendix to the program of the discipline (module) « Neurosurgery »
3. Developer(s): Zybinsky Ivan Alexandrovich, Associate professor of Department of General Medicine.
4. Expert examination of the ATF has been completed.

Expert group:

Chairperson: Kubanov Sergey Ismailovich, Deputy Dean of Faculty of Medicine and Biology for Practical Medicine;

Committee members: Pozdnyakova Oksana Yuryevna, Head of Department of General Medicine.

Kashnikov Vyacheslav Stanislavovich, professor of Department of General Medicine.

Employer organization representative: Vilensky I.L., Chief Physician of Independent CDL, LLC

Expert conclusion – the ATF allows evaluating the level of competency levels and is recommended to be employed in the educational process.

5. The validity period for the ATF shall be determined by the period of implementation of the educational program.

1. Description of Evaluation Criteria at Various Stages of Their Formation, Description of Evaluation Scales

Levels of formation of competence(s), indicator(s)	Descriptors			
	Minimum level not achieved (Unsatisfactory) 2 points	Minimum level (Satisfactory) 3 points	Intermediate level (Good) 4 points	High level (Excellent) 5 points
Competency PC-2. Ready to collect and analyze patient complaints, data of their medical history, examination results, laboratory, instrumental, pathological-anatomical, and other investigations to recognize a condition or establish the fact of presence or absence of a disease				
Learning outcomes for the discipline (module): Development of clinical thinking. Indicator: ID-1 PC-2 Knows how to carry out the collection of complaints, anamnesis of life, and disease of the patient and analyze the information obtained	Does not know how to carry out the collection of details concerning the patient's complaints, anamnesis of life, and disease	Knows how to carry out the collection of details concerning the patient's complaints, anamnesis of life, and disease	Knows how to carry out the collection of details concerning the patient's complaints, anamnesis of life, and disease	Knows how to carry out the collection of details concerning complaints, anamnesis of life, and disease, and how to analyze the information obtained
Learning outcomes for the discipline (module): Development of clinical thinking. Indicator: ID-2 PC-2 Conducts a complete physical examination of the patient (inspection, palpation, percussion, auscultation) and interprets its results	Does not carry out a complete physical examination of the patient	Carries out a complete physical examination of the patient	Carries out a complete physical examination of the patient (inspection, palpation, percussion, auscultation)	Carries out a complete physical examination of the patient (inspection, palpation, percussion, auscultation) and interprets its results
Learning outcomes for the discipline (module):	Does not define a preliminary diagnosis	Defines a preliminary diagnosis	Defines a preliminary diagnosis and compiles a plan	Defines a preliminary diagnosis and compiles a plan

Development of clinical thinking. Indicator: ID-3 PC-2 Defines a preliminary diagnosis and compiles a plan for laboratory and instrumental examinations of the patient			for laboratory examinations	for laboratory and instrumental examinations
Competency PC-3. Capable of determining the patient's main pathological conditions, symptoms, disease syndromes, and nosological forms in accordance with the International Statistical Classification of Diseases and Related Health Problems, 10th Revision.				
Learning outcomes for the discipline (module): Acquisition of special medical skills and their application in practical healthcare. Indicator: ID-1 PC-3 Is capable of building an algorithm and selecting criteria for determining the main pathological states, syndromes, and diseases in patients of various profiles in accordance with the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)	Not capable of building an algorithm and selecting criteria for identifying various profiles in the patient	Capable of building an algorithm and selecting criteria for identifying various profiles in the patient	Capable of building an algorithm and selecting criteria for identifying the patient's various profiles of main pathological conditions, syndromes, diseases	Capable of building an algorithm and selecting criteria for identifying the patient's various profiles of main pathological conditions, syndromes, diseases following the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)
Learning outcomes for the discipline (module): Acquisition of	Does not identify main pathological symptoms	Identifies main pathological symptoms	Identifies main pathological symptoms and syndromes,	Identifies main pathological symptoms and syndromes, defines a clinical

special medical skills and their application in practical healthcare. Indicator: ID-2 PC-3 Identifies main pathological symptoms and syndromes, formulates a clinical diagnosis in accordance with ICD-10			defines a clinical diagnosis	diagnosis subject to ICD-10
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The evaluation of the competency formation level in the discipline is carried out on the basis of the Regulations on conducting current control of academic progress and intermediate attestation of students in higher education educational programs – Bachelor’s programs, Specialist’s programs, Master’s programs – at the Federal State Autonomous Educational Institution of Higher Education NORTH-CAUCASUS FEDERAL UNIVERSITY in its current edition.

ASSESSMENT TOOLS FOR CHECKING THE LEVEL OF COMPETENCY DEVELOPMENT

Task Number	Correct Answer	Content of the Question	Competency
2	1. Nystagmus 2. Bradycardia and respiratory arrest 3. Psychomotor agitation 4. Hyperthermia	For cerebellar tonsillar herniation into the foramen magnum, the following is characteristic	PC-2
3	1. Skull radiography 2. Echo encephalography 3. Contrast enhanced MRI 4. Electroencephalography	Which method is the "gold standard" in the diagnosis of intracranial space occupying lesions?	PC-3
1	1. Lucid interval 2. Meningeal signs 3. "Spectacle" sign (periorbital ecchymosis) 4. Cerebrospinal fluid rhinorrhea	The classic sign of an epidural hematoma is	PC-2
3	1. Hematogenous 2. Lymphogenous 3. Direct contact (open wound) 4. Perineural	The most common route of infection in open head injury is	PC-3
4	1. Administration of antibiotics 2. Ventriculoperitoneal shunting 3. CSF sanitation	External ventricular drainage of the lateral ventricle is performed for the purpose of	PC-2

	4. Relief of intracranial hypertension		
2	1. Bleeding from the ear 2. "Spectacle" sign and CSF rhinorrhea 3. Vomiting 4. Respiratory disturbance	Fracture of the skull base in the anterior cranial fossa manifests as	PC-3
3	1. Meningioma 2. Astrocytoma 3. Glioblastoma (multiforme) 4. Medulloblastoma	The most common primary malignant brain tumor in adults is	PC-2
2	1. Brain parenchyma 2. Arachnoid mater 3. Choroid plexus 4. Ventricular ependyma	Meningiomas arise from	PC-3
4	1. Adrenocorticotropin secreting adenoma 2. Prolactinoma 3. Thyrotropin secreting adenoma 4. Somatotropin secreting adenoma	Acromegaly is characteristic of	PC-2
2	1. Kleine Levin syndrome 2. Bitemporal hemianopia 3. Homonymous hemianopia 4. Diplopia	For a pituitary adenoma growing suprasellarly, the characteristic symptom is	PC-3
2	1. Stomach, lung, and liver cancer 2. Renal cell carcinoma, prostate cancer, melanoma 3. Breast and ovarian cancer 4. Paranasal sinus and lip cancer	The tumors that most frequently metastasize to the skull bones are	PC-2
1	1. Regression of pain after a therapeutic diagnostic block of the joint 2. Functional radiography of the spine 3. Contrast enhanced MRI of the lumbar spine 4. Plain radiography of the spine	The method for confirming the diagnosis of facet joint syndrome is	PC-3
1	1. Inability to pronounce words 2. Lack of speech comprehension 3. Scanning speech 4. Perseverations	Motor aphasia is characterized by	PC-2
2	1. Epileptic syndrome 2. Acute hydrocephalus with herniation 3. Headache	An absolute indication for emergency surgical treatment of intracranial tumors is	PC-3

	4. Presence of a tumor in the cortex		
2	1. Arterial hypertension 2. Rupture of an arterial aneurysm 3. Trauma 4. Amyloid angiopathy	The most common cause of subarachnoid hemorrhage (SAH) is	PC-2
3	1. Filling defect 2. Vessel amputation 3. Early venous drainage 4. Stenosis	On angiography, an arteriovenous malformation (AVM) is characterized by	PC-3
3	1. Temporal lobe 2. Cerebellum 3. Basal ganglia (subcortical nuclei) 4. Occipital lobe	In hypertensive crisis, intracerebral hematoma is most often located in	PC-2
2	1. Heparinization 2. Thrombolytic therapy 3. Neuroprotective agents 4. Decompressive craniectomy	Treatment of ischemic stroke within the "therapeutic window" (up to 4.5 hours) involves	PC-3
3	1. Skeletal traction 2. Orthosis application 3. Decompressive laminectomy and transpedicular fixation 4. Massage and physical therapy	In unstable vertebral fracture with spinal cord compression, the treatment of choice is	PC-2
2	1. Complete block with contrast "cut off" 2. Filling defect with a "meniscus sign" 3. Dilatation of the central canal 4. No changes	An extramedullary tumor (e.g., meningioma) on myelography produces the following sign	PC-3
1	1. Neurogenic claudication (intermittent) 2. Lasègue's sign 3. Horner's syndrome 4. Gluteal muscle atrophy	A characteristic feature of central spinal canal stenosis is	PC-2
3	1. Trapezius muscle 2. Deltoid muscle 3. Biceps (elbow flexion) 4. Triceps	Cervical osteochondrosis with C6 root compression manifests as weakness in	PC-3
2	1. Radicular pain syndrome 2. Progressive lower paraparesis with pelvic organ dysfunction 3. Compression of the vertebral body by 1/3	An emergency indication for surgery in thoracic spine trauma is	PC-2

	4. Kyphotic deformity		
3	1. Meningococcus 2. Pneumococcus 3. Staphylococcus aureus and Gram negative flora 4. Tuberculosis	The most common causative agent of postoperative meningitis in neurosurgery is	PC-3
2	1. Stenosis of the aqueduct of Sylvius 2. Impaired CSF absorption by pacchionian granulations 3. Tumor of the fourth ventricle 4. Atresia of the foramina of Luschka and Magendie	Communicating hydrocephalus is characterized by	PC-2
2	1. External ventricular drainage 2. Ventriculoperitoneal shunting 3. Aqueductal stenting 4. Endoscopic third ventriculostomy (ETV)	The operation of choice for normal pressure hydrocephalus in adults is	PC-3
3	1. A hypodense area without clear borders 2. A hyperintense focus without edema 3. A low density area with ring like contrast enhancement 4. An intracerebral hematoma with a fluid level	On CT, a brain abscess in the typical "capsule" stage appears as	PC-2
2	1. Acute onset with loss of consciousness 2. A lucid interval of more than 3 weeks and a fluctuating course 3. Pronounced focal neurological symptoms from the first hours 4. Hyperthermia and meningism	Chronic subdural hematoma in the elderly is most typically characterized by	PC-3
2	1. Extensive intracerebral hematoma 2. Multiple punctate hemorrhages in the corpus callosum and brainstem 3. Large epidural hematoma 4. Cerebral edema without hemorrhage	In diffuse axonal injury (DAI) of the brain, CT/MRI most often reveals	PC-2
2	1. Gradual development over months 2. Symptoms of intoxication, fever, and focal seizures 3. Absence of changes in the complete blood count	For acute subdural empyema (collection of pus under the dura mater), the following is characteristic	PC-3

	4. Predominance of epileptic seizures without fever		
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2. Description of the Evaluation Scale

Within the framework of the rating system, students' academic progress in each discipline is evaluated during current control and intermediate attestation. The rating system for assessing students' knowledge is based on the use of a combination of control activities to check the covered material (checkpoints), optimally located throughout the entire time interval of studying the discipline. The principles of the rating system for assessing students' knowledge are based on the requirements described in the Regulations on the organization of the educational process based on the rating system for assessing students' knowledge at NCFU.

3. Criteria for Evaluating Competencies

The grade **Excellent** shall be awarded to a student if the theoretical content of the course has been mastered completely, without gaps; the material is presented exhaustively, consistently, clearly, and logically; the student freely copes with tasks, questions, and other types of knowledge application; uses additional material in the answer; all tasks provided for by the program are completed, and the quality of their execution is evaluated by a number of points close to the maximum; analyzes the obtained results; demonstrates independence when performing tasks.

The grade **Good** is to be awarded to a student if the theoretical content of the course is mastered completely, the necessary practical competencies are mainly formed, all educational tasks provided for by the training program are completed, and the quality of their execution is sufficiently high. The student firmly knows the material, presents it competently and strictly on the merits of the matter, without allowing significant inaccuracies in answering the question.

The grade **Satisfactory** is awarded to a student in case the theoretical content of the course has been mastered in part only, but the gaps are not of a significant nature, most of the tasks provided for by the program are completed, but contain errors, the student allows inaccuracies and insufficiently correct wording when answering the question, and violations of logical sequence are observed in the presentation of the program material.

The grade **Unsatisfactory** is awarded to a student if they do not know a significant part of the program material, allow significant errors, perform practical works with great difficulty and uncertainty, the necessary practical competencies are not formed, most of the educational tasks provided for by the training program are not completed, and the quality of their execution is evaluated by a number of points close to the minimum.