mankind. WHO predicts that by 2020, the morbidity and mortality from cancer will increase by 1,5–2 times worldwide. The Republic of Kazakhstan is characterized by a similar trend of cancer incidence growth, taking into account the welfare and life expectancy, as well as increased detection of malignant tumors with the introduction of early detection programs. Mortality from cancer in Kazakhstan ranks second in the structure of mortality; about 17,000 people, of whom 42% are people of working age, die of cancer each year. During the last twenty years, the absolute number of cases of malignant neoplasms in the Republic has increased: in 1998 there were reported 28,322 diseased persons, whereas by the end of 2011, their number had risen to 30,299. The annual growth in the number of patients with malignant neoplasms is 5%. Mortality from malignant neoplasms in the last twenty years has decreased from 130,8 per 100 thousand people in 1998 to 101.6 per 100 thousand people in 2012. Reduction in mortality is associated, primarily, with the improved diagnosis of malignant tumors in the early stages and the effectiveness of outcomes.

We studied the incidence of malignant neoplasms in the population of Semey region of East Kazakhstan Province during the past 20 years.

The average annual intense incidence rate of malignant neoplasms by periods has increased from 200,6 ‰ (1991) to 216,8 ‰ (2012). To a greater extent, the maximum increase in incidence of Semey region (EKP – East Kazakhstan Province) for 1991–2012 was caused by increased risk of illness, marked in lung, breast and stomach cancer, colorectal cancer, malignant tumors of the skin and cervix.

Incidence of malignant tumors in the Semey region in 1991 in males was 126,5 ‰, in females – 163,8 ‰; the year of 2012 showed a trend toward increasing – 213,2 ‰ and 220.2o/oooo. In this case, the leading positions in the structure of incidence among men are occupied by tracheal, bronchus and lung tumors – 22,7% (1991–26,9%), and gastric tumors – 15,1% (15,0%); colorectal cancer in males moved to the 3rd position – 9,3% (5,6%), displacing the incidence of esophageal and skin cancer – 6,9% (7,0%); followed by 6,4% (3,8%) incidence of hematological malignancies and malignant tumors of the prostate gland – 5,1% (0,9%).

The first place on the prevalence of cancer in the female population belongs to breast neoplasms – 22,0% (1991 – 13,3%), second and third place is occupied by cervical cancer – 11,9% (2,6%) and colorectal cancer – 9,6% (6,7%), surpassing the malignant skin neoplasms – 8,2% (11,8%), stomach cancer – 6,4% (11,1%) and hematological malignancies – 6,4% (3,9%).

Thus, the analysis of morbidity and mortality from malignant neoplasms shows a tendency to their overall growth. It is well established that lung cancer in Semey region consistently ranks first in morbidity and mortality mainly in the male working population, which has socio-economic importance. A persistent increase in tumors incidence of the gastrointestinal tract is observed. Breast cancer is one of the most frequent causes of death in women as compared with other forms of cancer.

The work was submitted to International Scientific Conference «Development of scientific potential of higher education», UAE (Dubai), March, 4–11, 2014, came to the editorial office on 11.02.2014.

THE EXPERIMENT OF CREATION OF BONE ANATOMIC PREPARATION FOR CRANIOMETRY FOR SCIENTIFIC PURPOSES

Opravin A.S., Ulyanovskaya S.A., Panafidina A.V., Bondarenko S.A., Drozd A.U., Zaporova O.M., Strusovskaya A.G., Chebykina E.N.

Northern State Medical University, Archangelsk, e-mail: usarambler78@rambler.ru

Purpose: To determine and choose the most suitable method of creation of the bone preparation in scientific laboratory setting.

Material and methods: 5 fetuses corpses (16–20 weeks) were provided by the maternity ward «Municipal Hospital № 1» in Severodvinsk. The creation of skull preparation was based on a simple maceration method in the scientific facilities of the Department of Human Anatomy of the Northern State Medical University. The study design was reviewed and approved by the local ethics committee of NSMU (protocol № 02/3-13 on 20/03/13).

Results: Preparation of skeletons with preserved ligaments of embryos, newborn and early-age children requires special equipment and skills. After analyzing the literature, some methods, which are based on using of special thermostats and the involvement of additional microorganisms, were excluded. The most suitable method of creation of bone preparations in this case was the way of maceration, i.e. maintaining the bones for a few months in the warm water in a closed vessel. Corpses used in this experiment were previously fixed in formalin, and therefore, they were previously briefly immersed in a weak solution of hydrochloric acid prior to maceration. Then the preparations were immersed in warm water in a vessel covered with a lid for access of air. After 4 weeks sawdust were added into the water to improve the decay. During next 3 weeks the process of maceration was extremely slow, so we mechanically cleared skulls from the soft tissues without damaging the bone. Then preparations were put in warm water with sawdust again to complete the process of decay. 28 days later the preparations were washed with running water and were put into a 20% solution of hydrogen peroxide for bleaching. The result was obtained in one day.

Conclusion: As a result, we got the high quality fetal bone preparation for craniometry using the maceration, in scientific laboratory setting. This

process was time consuming (4,5 months) and required a combination of different techniques.

The work is submitted to the International Scientific Conference «Modern Problems of Experimental and Clinical Medicine», Thailand, February, 19–27, 2014, came to the editorial office on 22.12.2013.

EVIDENCE BASED MEDICINE AS AN INSTRUMENT FOR THE STUDY OF INTERNAL MEDICINE

Pivina L.M., Maukaeva S.B., Zhumadilova Z.K., Urazalina Zh.M., Batenova G.B., Kurumbaev R.R., Kaskabaeva A.Sh.

Semey State Medical University, Semey, e-mail: solly66@mail.ru

The present time the proper medical practice, healthcare organizations and research activity requires the ability to critically and competently evaluate the results of the latest scientific and clinical research. It is necessary to stimulate the clinical and scientific thinking of the students, the use of interdisciplinary approaches for the acquisition of knowledge and skills. Currently, evidence-based medicine is a mandatory educational discipline for the third year students in accordance with Kazakhstan educational standards. Semey State Medical University actively implements of the method of integration of disciplines «Internal Medicine» and «Evidence-based medicine» to improve the skills of students in determining the optimal methods of diagnosis, treatment and prevention of disease in a particular patient in a concrete situation. The forms of such integration could be different. They include

1. Selection of optimal methods of diagnosis, treatment, prevention using case based learning method (CBL). In the clinical department the students under the guidance of teacher perform examination of the patient, an analysis of the examination results, define the clinical problem and discuss the reasonable tactic for examination and treatment. Then they confirm their opinion using the databases of evidence based medicine. For the searching of the necessary information the students use method (patient/population, intervention, comparison, outcome), define the key words to search the proper scientific based information in the different data bases including PubMed, MEDLINE, EBSCO, International Clinical guidance. Our students have very good possibility to use The Cochrane library. Then the students demonstrate the found information, discuss it and analyze the results of work.

2. Using the knowledge of evidence-based medicine in the independent student work for the description of clinical cases, presentations and essay.

3. Demonstration of knowledge in the clinical conferences and clinical symposia for discussion the most difficult and controversial clinical situations. In this case, the assessment of evidence-based medicine knowledge and skills is held by the expert in the field of evidence-based medicine

Analysis of the feedback from the students showed that almost 100% of them said that integration of evidence-based medicine and internal medicine is helpful to improve their knowledge and understanding in the field of study, research skills, critical and clinical thinking, 80% said that such learning improves their communication skills and teamwork skills. Only 10% of students reported difficulty in finding of relevant information due to lack of good knowledge of English.

The work is submitted to the International Scientific Conference «Implementation of integrated model of educational institutions, implements educational programs different levels of education», Republic of Singapore, December, 10– 17, 2013, came to the editorial office on 16.12.2013.

THE ROLE OF IMMUNE CELLS IN CARCINOGENESIS OF HPV ASSOCIATED ETIOLOGY

[1,2]Reva I.V., [2]Yamamoto T., [1]Tolmachev V.E., [1]Reva G.V.

[1]Far Eastern Federal University, Vladivostok, e-mail: RevaGal@yandex.ru;
[2]International Medical Research Center (IMERC), Niigata, Japan, e-mail: avers2@yandex.ru

There are bon the basis of their own data presented a comparative analysis of the existing model of carcinogenesis and the author's model in the work, as the development of Correa (1998). Author's concept involves ethiotropics factors for all effects of neoplastics of any nature, causing activation of proliferative activity and apoptosis leading to the depletion of the Cambium tissue. The authors acknowledge neoplastical processes local changes that are not related to changes in the genome of cells and induced when control of effector immunocytes processes of cell proliferation and apoptosis leading to generalized changes in the body, and secondary immune deficiency. Author's model of carcinogenesis based on data from the literature and own data involved in the formation of tumor blood stem cells migrated to the zone of damage may not initiate signalling molecules, and other effects, including the bioelectrical signals. The authors suggest that the local main damage cells even before the first clinical and morphological characteristics of leading cancer in humans, cause the start of generalized process violations in the regulation of differentiation and specialization of blood stem cells, circulating in the body, followed by the development of secondary immunodeficiency. Migration of blood stem cells, leaving them in the area damaged by the physiological tissue and inability to query a differentiation in the changed circumstances of the situation also involved a change of contact interactions. Reparative regeneration occurs with an attempt